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EXHIBIT 17

In Re Pacific Fertility Center Litigation, 3:18-cv-01586-JSC

AMENDED EXPERT REPORT OF ELIZABETH GRILL, Psy.D.

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I. Overview

This report details my opinions arising out of the failure of a cryogenic storage tank ("Tank Incident") that stored eggs and embryos at Pacific Fertility Center ("PFC"). Plaintiffs' counsel engaged me in this case in July 2019. I was asked to provide an overview, from the perspective of a licensed psychologist specializing in reproductive mental health, of the psychosocial and emotional impact of the family building journey and reproductive treatment, as well as the emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, and feelings of being out of control that individuals would be expected to experience in the event of a tank failure causing cryopreserved eggs or embryos to be lost or compromised. I have been asked to provide my opinion concerning emotional distress as a result of the incident experienced by [redacted]

The following provides my background and qualifications and sets forth my opinions and the basis and reasons for them. My curriculum vitae is attached to this report.

I hold all conclusions and opinions set forth in this report to a reasonable degree of certainty in my field of expertise. I reserve the right to supplement or change my opinions should new or additional information become available. I plan to review the testimony of other experts and reserve the right to respond to their testimony and to supplement my report. Further, at the time of trial, I reserve the right to respond to arguments made by the Defendants and their experts and other witnesses.

My hourly rate is $500 per hour. In the last four years, I have provided testimony as an expert witness in one matter, styled *In re: Ethicon, Inc. Pelvic Repair System Products Liability Litigation*, 12-md-02327 (S.D. Va.). In that case I provided an opinion for defendant Johnson & Johnson.

II. Qualifications

I am an Associate Professor of Psychology in the Departments of Obstetrics and Gynecology, Reproductive Medicine, and Psychiatry of Weill Cornell Medical College. I am also an Assistant Attending Psychologist at New York-Presbyterian Hospital. I am the Director of Psychological Services at the Ronald O. Perelman and Claudia Cohen Center for Reproductive Medicine. I have worked as a clinical psychologist and medical researcher for over 20 years. The focus of my career has been on the psychological and psychodiagnostic evaluation and treatment of women and couples managing all aspects of reproductive problems, sexual dysfunction and oncofertility issues. My daily responsibilities include the evaluation and treatment of individuals and couples managing the distress related to the diagnosis of infertility, reproductive medical treatment, and all aspects of assisted reproductive medicine and technology. Psychological counseling includes psychoeducation to manage expectations of treatment, coping techniques to reduce distress, decision making at pivotal time and treatment points, grief and bereavement counseling to manage loss, and supportive counseling to manage stress and explore alternative family building options.

I completed my undergraduate studies in Psychology and Communications with Highest Distinction from the University of Wisconsin, Madison and received my Psy.D in Clinical Health Psychology from the Illinois School of Professional Psychology. I completed a year-long psychology internship at the Manhattan Veterans Affairs Medical Center. I trained and led workshops at the New York University Child Study Center designed to teach couples communication and relationship-enhancement skills. I also trained for one year at the Bellevue Hospital Survivor of Torture Program.

My postdoctoral training included a one-year postdoctoral clinical and research fellowship at the Center for Reproductive Medicine of Weill Cornell Medical College. I also completed a two-year fellowship as a sex therapist at the Human Sexuality Program, Payne Whitney Clinic of the New York Presbyterian Hospital. Additionally, I was trained and certified at the Mind/Body Institute at Harvard Medical School.

I am the Secretary on the Executive Council at RESOLVE, the National Infertility Association; President Elect on the Executive Council of the Society for Sex Therapy and Research; and a member of the National Register of Health Service Providers in Psychology, and the American Psychological Association. I was the Past Chair of the Mental Health Professional Group of the American Society of Reproductive Medicine ("ASRM") and served two terms on the Content Review Committee of ASRM.

I serve as an editorial reviewer for Fertility and Sterility and Journal of Andrology. I am the recipient of several awards including the Mental Health Professional Group Prize Paper at ASRM, the Global Organization for Excellence in Health Care Award, and the American Fertility Association Family Building Award. I have written several articles and book chapters on topics such as the role of sex therapy for male and female infertility, infertility and sexual dysfunction in the couple, the psychosexual impact of cancer-related infertility in women, the emotional and sexual impact of infertility for women awaiting oocyte donation, the role of the mental health professional in the education and support of the fertility clinic medical staff and most recently, stress and infertility and ethics and counseling in reproductive medicine. I have lectured worldwide to patient, staff, and medical audiences about the emotional aspects of reproductive medicine, family building, sexual dysfunction, and oncofertility.

III. Methods and Sources of Information

For each plaintiff, I conducted a Comprehensive Psychosocial History for Infertility designed to provide a global impression of the patient's history, stressors, functioning, and current psychosocial status relevant to infertility and treatment. (Comprehensive Psychosocial History for Infertility (CPHI) (2006) in S. Covington & L. Burns (Eds.), Infertility Counseling: A Comprehensive Handbook for Clinicians (pp. 563-564)). I interviewed [redacted] on August 12, 2020, [redacted] on August 19, 2020, and [redacted] on August 14, 2020. On August 17, 2020, I interviewed [redacted] and on August 21, 2020, I interviewed [redacted]

In forming my opinions in this case, I relied on my education, training, clinical experience, research and review of peer-reviewed published literature. I also relied on my personal interview with each plaintiff and my review of their medical records,

deposition, and responses to Interrogatories and Requests for Production of Documents. A full list of the materials I relied on for each plaintiff is included as **Exhibit A**.

IV. Relevant Background

1) Relevant Background Pertaining To Fertility Decisions

a) Misperceptions Associated with Delayed Motherhood and Elective Egg Freezing

Many studies examining women who "delayed" childbearing have demonstrated that reproductive delay is sometimes not the outcome of deliberative choice, but is instead the result of various factors often outside of an individual woman's control. (Baldwin, K, 2018; Budds et al. 2016; Koert and Daniluk 2017).

The decision to freeze eggs is also complicated. Many women who freeze eggs do so because they are single and looking for a suitable and healthy long-term partner with whom to have children. (Baldwin et al. 2015; Greenwood, Pasch, and Huddleston 2017; Hodes-Wertz et al. 2013; Seyhan et al. 2017; Stoop, Nekkebroeck, and Devroey 2011).

This decision often includes the desire to live up to the ideals of what it means to be a good mother and to better align the right time for motherhood biologically, with the right time in a woman's social and emotional life. Women are often misunderstood for these decisions and labelled as "selfish career pursuing women" or "victims of a male oriented society" where women cannot combine motherhood with a good education or profession. As early as 2013, Belgian ethicist Heidi Mertes (2013) questioned whether these portrayals were accurate and suggested that the absence of a male partner is one common reason that women pursue elective egg freezing. Consequently, the decision to freeze eggs as well as the timing of motherhood are both within but also beyond the control of individual women. (Baldwin, 2018).

b) Why do Women Postpone Motherhood?

Several studies have showed that women "postpone," "defer," or "delay" childbearing for many economic, structural and relational factors. (Baldwin, et al., 2018; Argyle, et al, 2016; Cobo et al, 2016; Donnez et al, 2017; Goldman et al., 2016; Gunnala et al, 2017).

1. Relational Factors

As research has shown, by far the most important precondition people consider for parenthood is a stable relationship. (Bergnéhr, 2009; Eriksson et al., 2012). Relational factors include: the lack of a suitable partner who is equally committed to parenting, (Berrington 2004; Daniluk and Koert 2017); the perceived lack of procreative desire among men especially in urban settings, (Waldby 2015); the increase in cohabitating, (Mills et al. 2011); increase in relationship breakdown and the normalization of multiple partnerships prior to marriage, (Beaujouan and Bhrolchain 2011).

Traditionally, before a woman could fulfil her desire for a child, she had to first find a suitable partner. Egg freezing is advertised as a means of preserving options, and allowing women to "find the right person." Egg and embryo cryopreservation and

storage allows for flexibility in family planning, which gives women the freedom to wait for the right child-rearing partner during their most fertile years.

Studies examining those who have 'delayed' motherhood have also identified how the subjective perceptions and desires of individual women to feel emotionally and psychologically prepared for motherhood, (Daly 2011, Shelton and Johnson 2006), to have accrued the resources they believe they would need to be a 'good mother', as well the desire to have experienced life as a childfree independent adult, (Bergnehr 2009), also shape the timing of motherhood.

2. Structural Factors

Similar structural factors also recognized in the literature include the greater presence and activity of women in the work force, (Penfold and Foxton 2015); a change in gender roles brought about by the increased reliability of methods of contraception, (Tough et al. 2002); and longer periods of time spent in education, (Clarke and Hammarberg 2005). While these physical, economic and structural factors are increasingly well recognized in academic literature as shaping the timing of motherhood, relational factors are one of the most significant considerations when woman make the decision to postpone motherhood and freeze eggs.

3. Economic Factors

Numerous authors have identified economic factors that may shape the timing of motherhood which include: the need for a dual income household to meet the demands of the rising cost of living, (Daly and Bewley 2013, Waldby 2015); concerns about economic uncertainty and market instability, (Adsera 2011; Del Bono et al. 2011); the desire to establish financial security prior to parenthood, (Cooke et al. 2012; Daniluk and Koert 2017); the decline in the job for life model and growth in careers, (Daly and Bewley 2013, Waldby 2015); and the cost of childcare, (Berrington 2004). Others have even worried about the potential backlash of employers who offer coverage of egg freezing who in return may come to expect women to postpone childbearing through egg freezing. (Inhorn, M, 2013).

c) Why Do Women Pursue Fertility Preservation?

As noted above, the timing of pregnancy is not always a straightforward choice that depends solely on a woman's life plans and her priorities. Several studies have shown that women cryopreserve oocytes for several reasons including: (1) education and career; (2) financial and psychological stability; (3) prevention of age-related fertility decline; (4) maintenance of reproductive autonomy; or (5) lack of an appropriate partner. (Baldwin, et al.,2018; Argyle, et al, 2016; Cobo et al, 2016; Donnez et al, 2017; Goldman et al., 2016; Gunnala et al, 2017).

Several peer reviewed published studies have explored women's egg freezing motivations. In New York City, a survey of 183 women who had completed at least one cycle of egg freezing during the 2005–2011 "experimental" period showed that 84% were age 35 or older. (Hodes-Wertz et al. 2013). Asked why they had not had children earlier,

88% answered because of the lack of a suitable partner, 24% for professional reasons, 15% for financial reasons and another 15% because it was too large a commitment.

Ten respondents in the category 'other' said that they had a partner but it was the wrong partner with whom to have a child or that they were experiencing marital/partnership discord and therefore did not want to create embryos with this partner.

More than one-half of the respondents viewed the treatment as a backup plan in case natural pregnancy became impossible. For 38%, oocyte cryopreservation was both a backup plan as well as a means to defer conventional reproduction. Only 3% believed that oocyte cryopreservation was strictly a means to defer conventional reproduction.

In another follow-up study by Stoop et al. (2015) focusing on the psychological aspects of social egg freezing between 2009-2011, the average age of the women interviewed at the time of the survey was 36.7 years and 81% lacked partners. They cited the following motivations for having the procedure: the wish to have a 'back-up plan' against future infertility (65%); having more time to find the ideal partner (49%); never wanting to regret not having explored all avenues (32%); and wanting to eliminate the pressure of finding a partner (32%). Almost all women in this study still had a desire to have children. (Stoop et al. 2015).

In another study by Waldby (2015), most women (80%) were over the age of 36 years and reported the difficulties of finding a partner interested in children and family, and securing a relationship as the main reason for opting for social egg freezing.

Research has begun to focus on the complicated emotions that can arise after the egg freezing experience. Most recently, researchers in San Francisco, California, employed a validated decision-regret scale and scales of anxiety and depression among more than 200 women, age 36.4 on average, who had completed egg freezing between 2012 and 2016. Averaging 2 years post-egg freezing, women tended to report high levels of satisfaction with their egg freezing decision, but also significant levels of anxiety, depression, loneliness, and hopelessness about their "reproductive futures." (Greenwood EA, et.al., 2018). This indicates that egg freezing remains complicated far beyond just the decision and action to freeze.

1. Egg Freezing as a Means of Risk Management - The "Insurance Policy"

What compels women to take action in the face of age-related fertility decline and engage with egg freezing technology given its risks? As reflected in the above literature, decisions to undergo egg freezing are complicated. Egg freezing operates as a multifaceted means of risk management. (Myers, K., 2017). In addition to the demands of education, career, and financial stability, there are personal factors that lead women to postpone motherhood. Most women view egg freezing as a means of managing risks: risks of infertility and fetal genetic abnormality as well as the risk of losing the chance of biogenetic motherhood and the temporal risks of coordinating careers, relationships, and childbearing. (Myers, K., 2017). Despite the availability of adoption and assisted reproductive technologies ("ARTs") that enable various combinations of genetic,

gestational, and social motherhood, many women desire both genetic and gestational motherhood. (Meyers, K., 2017). Egg freezing promises to secure access to genetic motherhood by managing the risk of being unable to have genetically healthy and related children with advanced age in the future.

2. Egg Freezing as a Way of Making Time to Find the 'Right' Partner

Many women choose egg freezing to loosen the tight connection between their reproductive timeline and their path to finding the 'right' partner and to take the pressure off new relationships. (Myers et al. 2015; Waldby 2015). Many women are also seeking a partnership with a committed partner who embodies ideals associated with 'new fatherhood.' (Henwood and Procter 2003). Recent decades have seen a shift in the expectations of men regarding their engagement and emotional commitment to the family. (Dermott 2014, Henwood and Procter 2003). The ideal model of fatherhood is often described as men who are emotionally and actively engaged in preparing for parenthood as well as being a 'hands on father' after the birth of a child. (Baldwin, K., 2018). However, many women report difficulties in finding partners that match their expectations or hopes. (Marsiglio et al. 2013). Many women report finding men to be less interested in commitment and having a family and instead more concerned with engaging in more individual pursuits. (Baldwin, K., 2018).

Researchers, (Brown, E., and Patrick, M., 2018) show that by pushing their imagined child-bearing timeline further into the future through egg freezing, women hope to pursue romantic partnership for their own sake, rather than pursuing partnerships as a means to have children. Women ultimately want the time to find the right partners that are committed and ready to pursue parenthood. Kit Myers (2018) showed that many women worry that marrying too young or for the wrong reasons will set them up for conflict and instability.

3. Egg Freezing as a Way of Mitigating Fear of Future Regret

For several women, fear of regret functions as a motivating factor which drives them to undergo fertility preservation. (Baldwin, K. 2018). Women report fearing that if they do not make use of the fertility preservation technology, and are unable to one day conceive, they may come to regret their decision and blame themselves, or be blamed by others, for their resulting infertility. Women 'choose' to pursue fertility preservation to preserve the possibility of genetic motherhood in the future but also choose this technology because the consequences of resisting and potentially regretting the decision are too high.

4. Egg Freezing as a Way of Managing Motherhood Expectations

Motherhood is something that women expect to encounter at the "right" time in their lives and when they feel "ready" to take on the role of mother. (Baldwin, K, 2018). Women associate being ready for motherhood as linked to specific resources viewed as necessary to perform the motherhood role properly. (Bergnehr 2009; Lampic et al. 2006; Sol Olafsdottir et al. 2011; Baldwin, K., 2018). Some of these resources include: completing

formal education and becoming established in a chosen career; a secure job and income; a home suitable for childrearing; a suitable partner who shares their desire for parenthood; and the experience of living as an independent, childfree adult.

There are many factors influencing the ability to obtain these resources. Women are taking longer periods of time to complete education and training. It takes longer to establish careers with income to manage student loans and cover the cost of living. The rising cost of living often requires dual earning households to enable home ownership. (Berrington 2004; Daly and Bewley 2013; Waldby 2015). Changes in the way people meet and form relationships using dating apps and the internet has also led to complications including an impersonal process of relationship formation as well as dissolution. (Abowitz et al. 2009).

These factors can be seen as contributing to the challenge of achieving a particular set of preconditions prior to parenthood. While many are achievable goals, these preconditions are often achieved later in life and potentially after a women's fertility begins to decline. As Lowe (2016) has noted, unless women are able to achieve the resources deemed necessary for motherhood, they may feel required to 'sacrifice' their child desire until a time that they can fulfil this role. Consequently, when it comes to planning for motherhood, some women postpone their desires to become a mother beyond the ideal biological time (in their 20's and early 30's) in order to wait for the right psychosocial time (often in their 30's and 40's) when they feel they would be able to best perform the motherhood role. (Daly and Bewley 2013; Perrier 2013; Sevon 2005). Nevertheless, many women consider it necessary to spend time accumulating the necessary resources to minimize any resentment or regret about missed experiences after taking on the role of parent. (Baldwin, K., 2018).

5. Egg Freezing as a Way of Navigating Life Course Expectations

Life course theory and concepts such as age norms, the timing of lives, and life course transitions have been utilized by many authors when discussing reproductive timing, (Daly 2011), fertility intentions, (McQuillan et al. 2015), as well as infertility and involuntary childlessness, (Hadley and Hanley 2011; Loftus and Andriot 2012). Particularly relevant to the discussion of egg freezing in life course theory is the notion of life course expectations.

One study showed that participants held clear ideas about how they expected their lives to unfold. (Baldwin, K., 2018). They prioritized and valued the nuclear family, made up of a married mother and father with genetically related children, as the ideal family and had assumed as part of their anticipated life course that they would meet a partner and be able to pursue motherhood in this way. However, for many of the participants these firmly held expectations did not reflect the path their own lives had taken and instead they reported finding themselves "off course" from their own anticipated life course trajectory.

Research has shown how the experience of unexpected life course events such as relationship problems, infertility, and unwanted delayed parenthood, can be experienced

as a life course disruption or perceived failed life-course transition. (Culley et al. 2013; Loftus and Andriot 2012; Baldwin, K., 2018). This may be because, despite increasing numbers of women and couples delaying parenthood or choosing to remain childfree, motherhood is still perceived as the cornerstone of adult femininity. (Gillespie 2003; Russo 1976; Sevon 2005). As a result, women with unwanted childlessness and infertility report experiencing their bodies and selves as failures. (Greil et al. 2010; Henwood et al. 2011; Baldwin, K., 2018).

6. Egg Freezing as a Way of Managing Relationships, Break-Ups, and Divorce

Some women find themselves in relationships with men who are not ready to move forward with marriage and or family building. These women feel like they are at a disadvantage because they often do not have the luxury of biological time on their side, but they still want to remain in and work on the relationship. In these cases, fertility preservation is a means of managing the risk of starting a family beyond their reproductive years or the risk of a potential future break up and/or divorce. Freezing eggs can reduce feelings of anxiety related to a ticking biological clock, provide time for relationships to mature, and/or relieve pressure to settle for or stay in relationships with less-than-ideal partners. (Myers, K., 2017).

In cases of breakups or divorces, fertility preservation is seen as preserving reproductive potential and healing and moving forward with their lives in the aftermath of painful losses. (Inhorn et al., 2018). Breakups and divorces are often described as "traumatic," especially when a woman had committed many years to a relationship and even worse if those years were reproductive ones. Even when breakups or divorces are amicable, they can still be painful for the women who invested time and energy in the hopes of the relationship leading to marriage and /or children.

7. Egg Freezing as a Way of Avoiding or Postponing Single Motherhood

Most women consider single motherhood a difficult choice, a "last resort" or "plan B." (Inhorn M., et al., 2018). Women in Inhorn's (2018) study described several reasons why they did not wish to move forward with single motherhood. Some cited the high financial costs of raising a child alone, especially in expensive cities as a reason for not moving forward. Others felt that single motherhood represented "desperation" or "failure." One of the central reasons why women do not wish to move forward with single motherhood is the desire to pursue motherhood with a partner, who they would ideally be married to at the point of conception. Instead many women find themselves without a partner in their 30s and 40s and have to make decisions about how, if at all, they are going to go about pursuing motherhood. (Baldwin, K., 2018).

d) Stress and Reproduction—Physical, Emotional, Financial, and Social Impact

Individuals experience high levels of stress as they attempt to manage the physical, emotional, social, and financial concerns related to fertility preservation. It is understood

in the assisted reproductive technology ("ART") in vitro fertilization ("IVF") industry that undergoing egg retrieval is emotionally trying and physically demanding.

Women undergo stimulation and egg retrieval to freeze eggs and safeguard their reproductive future by storing those eggs in a tank. Making the decision to freeze eggs can trigger thoughts and feelings of loss related to self-esteem, identity, and romantic, familial, and social relationships. Deciding to freeze eggs often forces women to confront the fact that they have not met certain life goals or that they are being left behind by friends who are on track to meet them (e.g. married with kids or financially stable). This can lead to feelings of failure that they have let those around them down (e.g. partner, family, community, culture, religion). This process can often lead to strong emotions such as anger, depression, anxiety, fear, shame, and social isolation. Shame is one of the reasons why patients isolate and stop communicating and leaning on family and friends for support. Patients fear that they will be judged or misunderstood by others. (Greenwood et al., 2018)

Once patients start medical treatments, there is the added stress from the treatment itself, financial stress of paying out of pocket, and finally, stress from the possibility of treatment failure. Medical procedures are demanding and intrusive. (Benyamini V., et al., 2005). Women must learn how to give injections or ask others to help and must master the terminology and nuances of reproductive medicine. Lives are often put on hold, the cycle becomes all consuming, and women become beholden to treatment.

It is very common to experience anxiety and depression as a result of the preservation experience. (Pasch et al. 2016). For many women, the egg freezing process represents their last hope for having genetically related children. Each cycle can produce anxiety and fear that not enough eggs will be retrieved, or that the eggs retrieved will not be of a high enough quality. Multiple cycles are often recommended to bank enough eggs for a viable pregnancy in the future, but many women can only afford one cycle since few insurance companies cover the cost of egg freezing.

e) The Patient Experience of Loss

The experience of family planning, preservation, and its treatment means losses on many levels. Attachment to a future child happens well before the birth of that child and a psychological parenthood exists long before the physical reality of a pregnancy, (Covington, 2006; Jaffe et al., 2011). The "reproductive story," (Jaffe & Diamond, 2011; Jaffe et al., 2005), is an identification with parenthood that starts prior to conception and pregnancy and prior even to fantasies about a romantic relationship. These stories are internal narratives of what women and men imagine it will be like when they have children and become parents. These stories encompass all of the hopes and dreams parents have for their children and may take the form of concrete behavioral activities (e.g. reading stories, attending activities) or images (e.g. pushing a stroller down the street or celebrating milestones). Jaffe and Diamond (2014) explain that the reproductive story is so deeply woven into the very fabric of a person's identity that it might only be recognized when it unravels, whether due to infertility, miscarriage, stillbirth,

termination, or other perinatal trauma. (Jaffe & Diamond, 2011; Jaffe, Diamond, & Diamond, 2005).

f) The Emotional Trauma of Perinatal Loss

Perinatal losses are profound and often misunderstood. These losses include fetal demise prior to 20 weeks gestation (miscarriage and ectopic pregnancies), fetal death after 20 weeks (stillbirth), as well as the death of a newborn up to 28 days post-birth (neonatal death). (Moore, Parrish, & Black, 2011). Some (Covington, 2006; Jaffe & Diamond, 2011) argue that the definition of perinatal losses needs to be expanded to include Infertility and its treatment, chemical pregnancies or very early miscarriages, as well as multi-fetal pregnancy reduction. These events related to family building treatment are also reproductive losses and can result in a grief reaction similar to any other perinatal loss.

Perinatal loss causes emotional trauma. The impact of the loss of miscarriage or any other perinatal loss is devastating and is often minimized because it is viewed as a medical event. Women suffer in silence and isolation with feelings of guilt, self-blame, anger, grief, depression, and anxiety. (Adolfsson 2011; Chojenta et al. 2014 Brier, 2004, 2008; Freda et al., 2003; Robinson, 2011). In many cases, no one outside of the woman and her partner may have known about the pregnancy or the attempt to conceive leaving the woman or couple with no rituals to facilitate grieving and little support when they need it the most.

The bereavement process is complicated because the loss experienced is not just for the longed-for child but also what that longed-for child represents: loss of self-worth, loss of where they thought they would be at this point in their lives, loss associated with watching friends and coworkers expand their families, loss of hope, loss of identity, the loss of feeling healthy and normal, and loss of perceived control. (Cousineau and Domar, 2006). Women feel that their bodies have betrayed them, are traumatized with grief, and are unable to properly mourn because the loss is minimized by society and the proper supports are not in place. If men and women are unable to acknowledge or discuss the loss, a deep sense of shame and personal failure may become intensified and they may continue to feel isolated and alienated. (Greenfeld & Walther, 1993).

Women who have experienced miscarriage look to a future pregnancy as a primary method of grief resolution, although they might still fear loss in subsequent pregnancies. (Cote-Arsenault & Morrison-Beedy, 2001; Cuisinier, Janssen, deGraauw, Bakker, & Hoogduin, 1996; Turner et al., 1998). Bereavement is often complicated, and feelings of loss may be triggered by a subsequent pregnancy or the anniversary of the due date or miscarriage.

2) Relevant Background Pertaining To Infertility and Treatment

a) Stress and Reproduction—Financial, Physical, Emotional, and Social Impact

Infertility-related stress is multifaceted. The diagnosis of infertility and the subsequent treatment process may lead to psychological consequences ranging from depression, to anxiety, to general distress. (Rooney et al., 2018). There is overwhelming evidence in the

scientific literature that difficulty conceiving provokes an emotional crisis for women and men that is complicated and challenges coping skills. (Norre J et al., 2011). Individuals and couples experience high levels of stress as they attempt to manage the emotional, physical, social, and financial concerns related to infertility and its treatment.

1. Financial Burden

The costs of infertility treatment contribute to the stress of already burdened couples because the majority of states in the U.S. do not require health care plans to cover fertility treatment. On average, nationally, an IVF cycle costs between $10,000-$15,000, before medications, which typically run another $3,000 to $5,000. (https://www.reproductivefacts.org/ 2020; Forbes.com, 2014; Bayer, et al., 2002). For many couples, fertility treatment may strain their financial resources often causing couples to borrow money, dip into savings, or go into financial debt.

2. Emotional Distress

The experience of infertility and its treatment is often described by patients as a roller-coaster of emotions. Most infertility patients, especially women, consider the evaluation and treatment of infertility to be the most upsetting experience of their lives. (Freeman et al., 1985). The diagnosis of infertility is frequently associated with emotions such as grief, depression, guilt, anxiety and feelings of helplessness and loss of control. Infertility is experienced as a stressful life crisis that has been compared to that of cancer, AIDS, and other devastating diseases. (Domar, A., et al., 1993). There are also effects on a person's self-esteem, self-identity and on marital satisfaction and social relationships that further impact emotional wellbeing.

Those that undergo Assisted Reproductive Technology ("ART") treatment with hopes of having a biological child are at increased risk of experiencing psychological problems. When treatment failures ensue, it is not uncommon for IVF patients to report symptoms of depression, anxiety, anger, and isolation. On The Life Events Scale, the failure of IVF is rated equally to breast cancer, death of a family member, and worse than divorce. (Baram, 1998). Given the high expectation for successful treatment with modern medicine, and the concomitant anxiety and distress when a treatment cycle fails, nearly half of those who initiate treatment drop out after their first meeting due to stress and fear about the process, among other things. (Olivius et al., 2004; Rajkhowa et al., 2006; Schroder et al., 2004; Smeenk et al., 2004).

Several studies report high rates of depression and anxiety for men and women diagnosed with infertility. Researchers from one study found that 40.8% of infertile women assessed suffer from clinical depression, in addition to 86.8% women reporting symptoms of anxiety. (Ramezanzadeh et al., 2004). In another study, 352 women and 274 men receiving infertility treatment were evaluated for depression and anxiety. A total of 56% of the women and 32% of the men reported clinical levels of depressive symptoms. (Pasch et al., 2016). Additionally, 76% of the women and 61% of the men reported clinical levels of anxiety. (Pasch et al., 2016). A study in Denmark consisting of 42,000 women who underwent ART treatment evaluated women for depression, reporting 35% of positive cases, (Sejbaek et al., 2013); another study found 15% of women and 6% of men

reported severe depression after one year of unsuccessful infertility treatment. (Lund et al., 2009). In a recent study, 60 married women, 30 fertile and 30 infertile, were evaluated for depression, anxiety and stress. The results of the study indicate significantly higher rates of depression, anxiety, and stress in infertile women compared to fertile controls. (Kahn et al., 2019). Additionally, individuals with at least one fertility treatment failure had significantly higher rates of anxiety and depression than those who had not yet had a treatment failure. (Maroufizadeh et al., 2015).

3. Loss of Control

One of the most difficult emotional consequences of infertility is the loss of control over one's life. (Domar et al., 1997). For many couples, their infertility becomes all consuming. This loss of control may begin prior to a diagnosis as difficulty with conception can challenge a couple's notion that they are in charge of their own reproduction. Most patients are accustomed to planning their lives and for many, previous life experiences have taught them that anything is possible if they work hard enough. With infertility, this may not be the case and many people seeking infertility treatment may experience intense frustration and anger when they are not rewarded for their unrelenting efforts and numerous sacrifices to create a child. (Leiblum et al., 1997; Nichols et al, 2000). Struggling with infertility can be extremely disorganizing for a couple's sense of order in their world. (Domar et al., 1997; Nichols et al., 2000).

4. Treatment Burden

Once couples start on medical infertility treatments, there is the added stress from the treatment itself, financial stress, and stress from the possibility of treatment failure. The evaluation process leading to a diagnosis of infertility can become an all-consuming preoccupation involving many tests of both women and men. (Domar et al., 1997). Couples often experience these procedures as invasive and humiliating. Treatments may span several years, while patients feel increasingly more anxious and depressed with the number of cycles they undergo. (Boivin J, et al., 1995). Trying to juggle medical appointments and medicine regimes with job responsibilities can also increase pressure and may jeopardize careers. Medical procedures are demanding and intrusive. (Benyamini V., et al., 2005). Couples must learn how to give injections and master the terminology and nuances of reproductive medicine. During this time, lives are put on hold, attempts to conceive becomes all consuming, couples become beholden to treatment and may no longer feel in control of their bodies or their life plans.

5. Impact on Relationships - Withdrawal and Isolation

The infertility experience challenges every aspect of patients' lives. Successful conception is an imperative aspect of most marital relationships and can have a significant impact on marital success, intimacy, and the quality of life of both partners. A couple's intimacy is often reduced to scheduled intercourse on demand which can create sexual dysfunction and tension for both men and women. (Grill et al., 2016).

Unfortunately, the diagnosis of infertility not only presents relationship challenges, but also forces those facing infertility to confront familial and societal pressures. Despite the

high prevalence of infertility, the majority of infertile couples do not share their story with friends and family, thereby withdrawing from much needed support and increasing their vulnerability to psychological problems. (Ramezanzadeh et al., 2004).

Being around friends and family who have children becomes difficult. Infertile couples often experience significant isolation from the fertile world due to perceived or real social unacceptability and lack of empathy from family and friends regarding their depth of despair. Particularly difficult is the negotiation of social settings, such as dealing with feelings of jealousy and envy when learning about other women's pregnancies or being in the presence of others who have children. (Domar et al, 1997).

Religion can also play a complicated role for people struggling with infertility. Strong religious beliefs may help or interfere with coping and healing. On the one hand, some may find comfort by believing that infertility is part of a divine plan, while others may interpret infertility as punishment from a higher power for past sins and indiscretions. Some may turn to faith as a way of coping while others may question their belief in religion and God. (Domar et al., 2005).

6. Gender Differences

Women struggling with infertility experience greater levels of psychosocial distress than men with respect to grief, guilt, denial, anxiety, cognitive disturbance, depression, and hostility. (Dunkel-Schetter C, et al., 1991). Women view the role of mother as an integral part of their femininity, gender identity and sexuality. Consequently, anything that threatens this role has the potential for negative social pressure and internal conflict. (Peterson et al., 2006). For many women who assumed they would someday have children of their own, infertility can challenge her core female identity. A diminished sense of self-worth can develop, not only because her body has "failed" but also because her self-esteem has been damaged. (Greil, 1991).

Fertility treatment is generally more invasive, time consuming, and often more painful for women than it is for men. (Wright J, et al., 1991; Benazon N, et al., 1992). Infertility-related stress for women can be associated with not only the diagnosis but also the treatment procedures, many of which are physically, psychologically, or pharmacologically invasive. As such, women carry the psychological burden of infertility, even when the reproductive impairment lies with the male partner. (Abbey et al., 1991). Women undergoing fertility treatment characterize infertility as the most stressful experience of their lives, (Freeman E.W. et al., 1985), likely contributing to higher reported rates of depression and sexual dysfunction. (Nelson CJ et al., 2008; Lukse MP et al., 1999).

Men also experience the psychological repercussions of infertility, but their experience seems to be under-represented in the clinical literature. Research derived from in-depth interviews suggests that men can experience considerable distress when faced with infertility, and that this distress (with regard to self-image, social stigma, etc.) is likely greater in men with male-factor infertility than men with unexplained or female-factor infertility. (Webb et al., 1999; Throsby et al., 2004). Men who felt that they were responsible for the couple's failure to conceive experienced a greater sense of sexual

failure and appeared to have problems discussing fertility issues with family and friends, believed others would not understand their concerns, and tended to isolate socially. (Smith et al., 2009; Petok, W., 2015).

Several studies have indicated that men are psychologically affected by infertility. (Wright et al., 1991; Carmeli et al., 1994). For instance, men experience damage to self-esteem and inadequacy in relation to their societal role and masculinity and may feel responsible for denying their partners a child. Several studies found that, compared to a control group of men without known fertility problems, infertile men experience low self-esteem and high levels of anxiety. (Glover et al., 1996, 1999; Kedem et al., 1990). This distress persisted 18 months after treatment, regardless of whether a live birth was achieved. (Glover, 1999). In a recent study (Hanna, E, et al., 2017), 93% of men stated their well-being had been impacted by infertility and described it as "the most upsetting, dark and emasculating experience of my life." Some men also experience transient episodes of impotence and sexual performance anxiety which add to the distress. (Saleh et al., 2003).

Recent research has shown that while suffering from infertility may be nearly equally distributed between women and men, men have more difficulty in communicating this emotional crisis. Men tend to use fewer coping strategies overall. Men typically prefer an instrumental grieving style to regain a sense of control, whereas their female partners are often characterized by an intuitive grieving style such as the expression of feelings. (Wischmann et al., 2003). Men tend to cope by increasing their involvement in work and other activities; they are more optimistic and problem-solving-oriented; and they are less apt to use social support. (Jordan et al., 1999). In keeping with masculinity norms, many male partners tend to suppress their emotions in an effort to support their wives, (Berg et al., 1991); this tendency may also result in the under-reporting of actual levels of infertility-related distress among men. (Greil, 1997).

3) Relevant Background Pertaining to Embryo Status

a) Conceptualization and Attachment to the Embryo

The patient perception of human embryos ranges from fully human to biological cells, (de Lacey et al., 2012), and many infertile patients describe frozen supernumerary embryos as "potential" babies, children or persons, and "virtual" siblings of existing children, in frozen suspension, especially if from the same batch of embryos as their existing children. (Laruelle and Englert, 1995; de Lacey, 2005, 2007, 2017; Lyerly et al., 2006; McMahon et al., 2000; Nachtigall, et al. 2005; Provoost et al., 2009). For some patients, the act of embryos being discarded or destroyed symbolizes death.

Patients often have a natural emotional attachment to their embryos. The situation of having potential human life outside the body and cryopreserved in storage is emotional for many IVF patients. Before becoming parents, embryos symbolize a successful endpoint of ovarian stimulation and an opportunity for pregnancy. However, after conceptualizing the developmental continuum of embryo to a live child, embryos, for some patients, can symbolize "virtual" children. Within this perspective, those who do not wish to use their embryos for family building may still wish to donate and metaphorically associate embryo donation as the opportunity to give life. This is clearly

the case for many patients who wish to put them in the hands of someone who could give them life through surrogacy or donation. (Newton et al., 2003; Drapkin et al., 2010).

Several studies point out that parenthood as an outcome of treatment changes the patients' perspectives of the embryo. (McMahon et al., 2000; de Lacey, 2005; Hammarberg & Tinney, 2006; Fuscaldo et al., 2007). De Lacey (2005) found that the combined experiences of visualizing an embryo, then visualizing and becoming aware of a fetus and welcoming a child into the world, formed a powerful conceptual continuum even if these experiences were related to different embryos and fetuses. Witnessing the continuum of human development from what several participants referred to as "potential life" to "real, live children" was powerful. (de Lacey, 2005).

The factor that contributes most to patients' decision to dispose of embryos is the way in which people conceptualize the embryo. (de Lacey, 2005; Nachtigall et al., 2005; Lyerly et al., 2006; de Lacey, 2007; Nachtigall et al., 2009; Provoost et al., 2009; Provoost et al., 2011; Provoost et al., 2012b). Several authors have noted that increased awareness of feelings for an embryo may affect patients' final choice. (Brinsden et al., 1995; Saunders et al., 1995; Cooper, 1996; Newton et al., 2003). Conceptualizations of the embryo vary from viewing it as biological material to a living entity capable of experiencing suffering and to a "virtual" child. (de Lacey, 2005; Nachtigall et al., 2005; Lyerly et al., 2006; de Lacey, 2007; Provoost et al., 2009). Patients have several opportunities to view embryos and save pictures of what they have created, which forges a powerful bond for some and ultimately a tangible loss.

b) The Moral Status of the Embryo

The situation of having potential human life outside the body and in cryostorage is unique. Participants in one study, (de Lacey, 2005), found the unique status and relationship between themselves, their children, and their embryos difficult to speak about because there is no language available that adequately portrays the experience or describes the relationship they clearly perceived. For the participants in this study, embryos were considered part of their family that existed yet simultaneously did not exist. For instance, "[e]mbryos were attributed a personhood that lacked physical presence but contained biology and spirituality. In this sense they acquired a virtual personhood." (de Lacey, 2005, p.1665).

On considering their frozen embryos, many regard them as genetically linked to their family, (de Lacey, 2005; de Lacey, 2007; Goedeke & Payne 2009), and as having moral status, (Lyerly et al., 2008; Provoost et al., 2011). Patients recognize the potential for human life, especially if they have existing children and think of them in terms of being a replica and sibling, a virtual child, a "tiny baby," or as a member of the family. (Brinsden et al., 1995; McMahon et al., 2000; de Lacey 2005; Nachtigall et al., 2005; Lyerly et al., 2006; de Lacey, 2007; Provoost et al., 2009). In Stiel's study (Stiel et al., 2010), as many as 88.5% perceived stored embryos to be siblings to their existing children.

Research shows that those ascribing high moral status to human embryos are more likely to use their embryos for future pregnancy attempts, donate embryos to another couple, or choose an alternative disposition option (compassionate transfer or a disposal

ceremony). (Drapkin et al., 2010). In contrast, those ascribing lower moral status to human embryos are more likely to thaw and discard embryos or donate them for research. (Lyerly et al., 2008).

c) Symbolism of the Embryo

For many, the embryo symbolizes the intimate relationship between the partners. People who emphasized the symbolic nature of the embryo to their partnership were less likely to consider donating embryos/eggs to others and less willing to consider donation to science. (Provoost et al., 2012a). In addition, it has been reported that embryos were viewed as symbols of the infertility that had dominated people's lives for many years, (Nachtigall et al., 2005), or represented the extreme personal and emotional effort and cost required to create them. (de Lacey, 2007).

d) Death and the Embryo

When embryos are thawed for discard or unsuccessfully transferred, the potential for life ends and this may be conceptualized by some as death even though legally, a life has not started. The meaning ascribed to their death differs according to individual and society values and experience.

The findings of one study suggest that the meaning attributed to embryo death was associated with perceptions of the embryos along a continuum from a grouping of cells to a baby. (de Lacey, 2017). When told that her embryos had died while thawing, one female participant, described feeling as if she had "been stabbed," adding, "It was like your children dying." Several women in the study described their discomfort in making the decision to discard embryos. One participant did not "want to know how they [the clinic] murdered them [the embryos]." (de Lacey, 2017). Another woman felt like a "killer" when deciding to discard her embryos while another participant described the decision to discard embryos as "sort of like euthanasia." (de Lacey, 2017).

e) Sequestration and Scientization

Mellor and Schilling (1993) described sequestration as a process by which death and dying has been steadily removed from public life and institutionalized. De Lacey (2017) explained that while disembodiment and the technology of visualization has brought embryos to life and made them real, it has simultaneously made their death invisible and unfamiliar. The invisibility of the embryo hampered emotional closure. For example, embryos must be placed under high performance microscopes to be seen. They are sequestered in the highly technological environment of the IVF laboratory where their death takes place without pronouncement or even notification. This mirrors the ways in which miscarriage has been described as sequestered through invisibility of the pregnancy and fetus, and how grief becomes disenfranchised through sequestration. (Frost et al., 2007). Ellison and Karpin (2011) point out the indeterminacy of such a situation: "This is a 'death' without a body . . . [the embryo] is invisible yet visualizable, it can be made to pass from a state of apparent life to a state of apparent death by exposing it to nothing more taxing than room temperature."

f) Grieving the Embryo

The discard of human embryos is a new and unique experience for women and their partners and making sense of this for couples involves translating that process into experiences that are more familiar. (de Lacey, 2017). Feelings of sadness, depression, loss, guilt, and emotional distress are all typical emotions described by experts in relation to the process of grieving. (Charmaz 1980, Kehl 2006). Several women describe similar feelings and a period of mourning following their consent for embryos to be discarded. (de Lacey, 2017).

The findings of one study, (de Lacey, 2017), showed that participants mapped their experience of embryo discard onto various experiences of loss such as stillbirth, miscarriage, pet or human death; described feelings of grief; and in some cases outlined rituals that mimicked human or pet cremation and burial practices. Several studies, (Lyerly et al., 2008, Provoost et al., 2011; de Lacey, 2017), show that patients seek more respectful and ritualistic ways of discarding their embryos. Infertile women in particular, map embryo discard onto discourses of reproductive loss. (de Lacey, 2017). As noted above, because embryo discard is often performed behind closed doors and embedded in institutional practices, they become sequestered losses with disenfranchised grief experiences similar to miscarriage. (Frost et al., 2007).

g) Rituals around Embryo Discard

Evidence from the academic literature suggests there is a significant minority of patients who seek alternative means of embryo disposition. (McMahon et al., 2000; Nachtigall et al., 2005; Lyerly et al., 2006; Melamed et al., 2009). Laboratory disposal is perceived by some patients as similar to throwing their embryos in the trash and thus is morally distasteful. (de Lacey, 2017). Given that IVF is typically a lengthy, arduous, and expensive process, simple disposal can be perceived as incongruent with and not reflective of the great effort undertaken.

Women have expressed a desire for embryo discard options that resemble bereavement practices. Social rituals and disposal ceremonies are designed to pay moral respect to the embryo. (Meyer and Nelson, 2001). The process of saying goodbye to a person and conducting ceremonies is perceived to be part of healthy grieving and recovery from loss. (Kastenbaum 1977). Although women approach the collection of their embryos and their personal discard differently, many share the common themes of wanting to discard their embryos in a more respectful way than medical disposal and to acknowledge its personhood and membership of their family.

Lyerly et al., (2006) reported women's desire for a respectful ceremony in the clinic while others sought funeral ceremonies or a "compassionate transfer," defined as undergoing embryo transfer at the wrong time in a menstrual cycle. Some patients see the ceremonial aspects of compassionate transfer as similar, though not necessarily equivalent, to the opportunities afforded to parents experiencing embryonic or fetal loss, such as holding a stillborn child. (de Lacey, 2017). These patients desire the opportunity to say goodbye and mark the loss of their embryos in a manner they feel reflects their parental attachment to these potential children.

Provoost et al., (2012) reported participants who viewed an embryo as a "symbol of their relationship" preferred compassionate transfer to outright disposal. Parry et al., (2006) noted that some participants wanted to be present at embryo discard or collect them and discard them personally.

V. Opinions Regarding [redacted]

1) Summary of Opinions

As described in this report, I conclude the following regarding Mrs. [redacted] to a reasonable degree of professional certainty:

(1) The process of deciding to retrieve and freeze eggs or create embryos as well as the procedures of retrieving and storing eggs were physically, emotionally and financially demanding and stressful for Mrs. [redacted]

a. Women make a substantial physical, emotional, and financial investment to obtain eggs and the expectations that great care will be taken to preserve and protect the eggs to avoid harm. Mrs. [redacted] made this investment.

b. Patients commonly experience symptoms of anxiety and depression as a result of procedures associated with egg retrieval. Mrs. [redacted] experienced complicated emotions such as worry, shame and guilt during the decision-making process. She decided to freeze eggs as a backup plan to take responsibility for her future fertility while she continued her search for the right partner.

c. Mrs. [redacted] suffered physically and emotionally from the stress and discomfort of the injections and hormones throughout the stimulation and retrieval process.

d. Although Mrs. [redacted] experienced the decision-making process and procedure to freeze eggs as arduous and stressful, she was pleased with the outcome of the retrieval and felt empowered that she decided to store eggs with the understanding that they would be kept safe for her when she was ready to use them.

(2) The tank failure resulted in significant emotional distress and psychological harm to Mrs. [redacted]

a. Cryopreservation and freezer storage services are sold as an "insurance policy" that allows women the freedom to defer having children until they find the right partner, finish their education or pursue careers that could in turn provide peace of mind. Mrs. [redacted] believed the storage of her eggs provided her such an insurance policy.

b. Loss of or damage to those eggs—or even the mere possibility of loss or damage—can be traumatic for the person whose eggs are (or were) frozen. Mrs. [redacted] experienced trauma as a result of the Tank Incident.

c. The Tank Incident robbed Mrs. [redacted] of her "insurance policy" and her oocyte disposition rights, and forced her to contemplate outcomes that were never part of her original decision-making or family building plans when she froze her eggs in the first place.

d. The Tank Incident and Mrs. [redacted] resulting loss of family planning flexibility has caused her to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of being out of control, and the experience has triggered feelings associated with previous perinatal trauma.

e. Mrs. [redacted] is left grieving the loss of genetic material that represents her sacrifice, struggle, genetic connection to her children, and future family building plans.

f. In addition, the traumatic stress of the Tank Incident was compounded by a miscarriage Mrs. [redacted] had two months after the incident, further intensifying her emotional distress and grief, and complicating her relationship to the eggs that were in the Tank. The Tank Incident caused Mrs. [redacted] to feel loss of hope, loss of identity, loss of feeling healthy and normal, loss of self-worth, and loss of perceived control. The helplessness she felt about the miscarriage was further complicated by the powerlessness and vulnerability she had already been experiencing as a result of the Tank Incident and the attendant loss of her "insurance policy."

g. After the miscarriage, Mrs. [redacted] became fearful that she would not be able to conceive again and worried about another miscarriage. This anxiety increased her stress and concern, causing feelings of distress and anger about the Tank Incident and its effect on her eggs. The understanding that she no longer had an "insurance policy" also increased her stress and anxiety, as she attempted to (and ultimately did) become pregnant again.

h. As a result of the Tank Incident, Mrs. [redacted] has been forced to contemplate making important and immediate reproductive decisions in a short period of time under significant duress, depriving her of the freedom and flexibility she sought when she decided to freeze eggs. The only way to determine whether the eggs she had in the Tank at the time of the incident remain viable is for Mrs. [redacted] to thaw, immediately fertilize, and transfer her eggs. But Mrs. [redacted] has no reassurance that the eggs are viable or would result in a healthy embryo and child. She does not know what additional risks attempted pregnancies with Tank 4 eggs may involve.

i. The purpose of cryopreservation was to allow Mrs. [redacted] to make safe reproductive choices on her own timeline. Instead, Mrs. [redacted] was thrust into a state of emotional distress, confusion, uncertainty, panic, loss, anxiety, anger, fear, and grief as a result of having this important choice taken from her.

2) Evaluation of Mrs. [redacted]

Mrs. [redacted] is a 42-year old woman who was born and raised in Long Beach, California. Mrs. [redacted] earned her BA from the [redacted] in 1999 and an MBA from [redacted] in 2004. She reported that she was working full time

as a financial advisor when she earned her MBA. In 2003, she sold investments at [redacted] and from 2004-2007, she worked as a wholesaler at [redacted] She has spent the last 13 years working for [redacted] as a wholesaler to a financial company. She has earned her series 7, 63, and Life and Disability insurance licenses.

Mrs. [redacted] met her husband, [redacted] through friends in 2014 and they were married in 2016. They now have two sons, ages 3 and 16 months.

a) Psychosocial History

Mrs. [redacted] reported that she does not smoke or use illicit drugs, and has no personal history of alcoholism or mental illness. She has not participated in therapy and has not taken any psychiatric or prescription medications. She has no history of emotional, physical or sexual abuse and noted that the Tank Incident and subsequent miscarriage were traumatic events in her life.

b) Fertility Preservation

In or around February 2013, Mrs. [redacted] froze approximately 17 eggs at PFC. According to Dr. Liyun Li, (medical chart notes 3/13/2013) this would "provide her with a good chance of 1 baby." (MSO_GS_000155). As Mrs. [redacted] put it, "The eggs were my back up plan." (Dr. Grill Interview of [redacted] She explained that the Tank Incident made her feel that her back up plan was taken from her and she worried about the consequences in the event that something happened to her children and/or if she and her husband wanted a third child.

c) Motivations to Preserve Fertility

Mrs. [redacted] shared that when she was 34-years old, she was fixated on wanting to freeze eggs before she turned 35-years old, which is often the case for women approaching milestone reproductive years who have knowledge of the potential for a decline in their fertility. She explained that 35 was an age she understood represented the beginning of fertility decline and she was "worried about waiting any longer." ([redacted] Interview). IVF patients are consistently reminded that egg quality diminishes with time, with miscarriages and chromosomal abnormalities occurring more frequently for women who are older at the time of pregnancy. Similar to the research described above about fertility preservation motivations, (Myers, K., 2017; Bergnéhr, 2009; Eriksson et al., 2012; Berrington 2004; Daniluk and Koert 2017), Mrs. [redacted] took responsibility for her reproductive future and felt "empowered to take the reproductive journey in my hands to protect my future." ([redacted] Interview).

Mrs. [redacted] has articulated her concerns about the risks of motherhood at an advanced age. She explained, "I was approaching 35 and I was single at the time and I wanted to make sure that whenever I was ready to have a baby, that I had the best chance of doing so. And I figured having 34-year-old eggs would be better than any age after that" [redacted] Dep. at 56).

Mrs. [redacted] also acknowledged that fertility anxieties could lead to poor relationship choices—another very common motivation for egg freezing. (Myers, K., 2017; Brown, E., and Patrick, M., 2018). Mrs. [redacted] explained that fertility preservation "allowed me to

be selective about a partner and not sacrifice the quality of a partnership to have a baby." ([redacted] Interview). Mrs. [redacted] chose to freeze her eggs at 34 years of age to ease the pressure on her romantic life saying, "Freezing eggs gave me the confidence to find the right partner and I no longer felt like a ticking time bomb who had to make compromises finding a partner." ([redacted] Interview). She indicated that if she didn't find the right partner, she would have been open to having a child on her own in the future and wanted to keep her options open.

Ultimately, just as most women freeze eggs because they are single and looking for a suitable and healthy long-term partner with whom to have children, (Baldwin et al. 2015; Greenwood, Pasch, and Huddleston 2017; Hodes-Wertz et al. 2013; Seyhan et al. 2017; Stoop, Nekkebroeck, and Devroey 2011), Mrs. [redacted] noted that she froze eggs because she wanted to find the right partner, take the pressure off of dating, and not settle for a man just to have a child. When Mrs. [redacted] met her husband she felt, "This is how it is should feel" and stated, "I wouldn't have changed anything, I am absolutely with the right partner and we met at the right time." ([redacted] Interview).

d) Physical, Emotional, Financial, and Social Impact of Fertility Preservation

The research detailed above about distress during the fertility preservation process is consistent with Mrs. [redacted] described experience. (*See, e.g.*, Benyamini V., et al., 2005). She remembered the process being "tedious" and recalled feeling physically "bloated" and emotionally "moody" and stressed "juggling shots, doctor appointments, and my work schedule." ([redacted] Interview). She administered the shots herself and then her friend helped her with the HCG intramuscular trigger shot. She noted that she felt "anxious wondering if the treatment will work" and questioned, "Will I have enough eggs?" ([redacted] Interview).

She was conscious of the money she was paying out of pocket, adding pressure to the cycle, because she could not afford to do another cycle. Egg retrieval and cryopreservation services are costly and can run into the tens of thousands of dollars. Freezing eggs was a financial burden for Mrs. [redacted] who paid approximately $17,000 out of pocket and took money from her savings account to pay for the medications, procedures, and storage costs.

Mrs. [redacted] noted that during the process of freezing, she "went inward" instead of sharing her story with others. ([redacted] Interview). She explained that while she felt empowered, she also felt shame and embarrassment that she was not married and needed expensive technology and medicine to preserve her fertility. The decision to freeze was additionally stressful for Mrs. [redacted] because she "didn't see black people freezing eggs. It wasn't in the realm of my world." ([redacted] Interview).

The shame she felt resulted in her silence. She didn't tell anyone in her family about her plans to freeze. She explained, "I have more means and freezing eggs would have been seen as wasteful. I was embarrassed to be doing this." ([redacted] Interview). She went on to explain that she was already embarrassed that she wasn't married and was worried she would be judged by her family if they knew her plans to freeze eggs. When Mrs.

[redacted] friend froze eggs, she began thinking more seriously about it and questioned, "Why wouldn't I give myself the best chance of having a child in the future?" ([redacted] Interview).

Mrs. [redacted] commented about how she has tried to move beyond her embarrassment and shame related to her fertility. She stated, "We live in a different time now. More things are becoming socially acceptable. Women should be able to talk about reproduction. No one even knows about my miscarriage." ([redacted] Interview). Mrs. [redacted] asked, "Why should women feel secretive and ashamed of the thoughtful and deliberate ways that they plan and protect their future ability to build a family and feel ashamed when it tragically ends in miscarriage and they suffer silently?" ([redacted] Interview).

e) Family Building History

Mrs. [redacted] began discussing her desire to have children with her husband one month after they met. They began trying to conceive five months after they were married. She explained that she is older than her husband and was concerned about waiting because of her age. When Mrs. [redacted] was 38-years old, she conceived her son naturally in May 2016 after trying to get pregnant for two months. She gave birth on January 27, 2017 and described the birth as "traumatic." ([redacted] Interview). She explained that at eight months, she developed preeclampsia and during the birth, her son swallowed meconium and was put in the NICU. Mrs. [redacted] stated that she started "getting the itch" for another baby when her son was 1-year old. ([redacted] Interview). She noted that her husband needed to "warm up to the idea" but she stated that ultimately, he was okay trying to conceive again so soon because "he wanted to build a bigger family." ([redacted] Interview).

Although Mrs. [redacted] and her husband began discussing having children early in their relationship, Mrs. [redacted] had not told her husband about the eggs she had cryopreserved until the day of the Tank Incident. As Mrs. [redacted] explained, "I preserved those eggs so that I could produce a baby at some time in the future. That didn't – he wasn't around. He didn't have anything to do with that decision." ([redacted] Dep. at 123). Again exhibiting feelings of embarrassment and shame, Mrs. [redacted] also pointed out that she had not discussed the eggs with her husband "because that's my personal business." ([redacted] Dep. at 123).

f) The Tank Incident and Associated Perinatal Loss

Mrs. [redacted] experience after the Tank Incident is consistent with the research described above. Infertility, miscarriage, stillbirth, termination, or other perinatal trauma cause feelings of loss not just for the longed-for child but also what that longed-for child represents: loss of self-worth, loss of where they thought they would be at this point in their lives, loss associated with watching friends and coworkers expand their families, loss of hope, loss of identity, the loss of feeling healthy and normal, and loss of perceived control. (Cousineau and Domar, 2006; Jaffe & Diamond, 2011; Jaffe, Diamond, & Diamond, 2005). Mrs. [redacted] experienced many similar emotions after the Tank Incident.

In February 2018, Mrs. [redacted] became pregnant. The Tank Incident occurred in March 2018. Mrs. [redacted] learned about the Tank Incident from a friend who instructed Mrs. [redacted] to check her email. She remembered feeling filled with "anger" and said that when she read the email, she felt "shock and disbelief" and asked, "Why me? Why my tank?" ([redacted] Interview). She felt shock, distress, confusion, grief, anxiety, and loss. As she stated in her deposition, "they had a product that was not up to code, up to standard, and it was sent out and used to store my eggs, and it failed." ([redacted] Dep. at 131). Mrs. [redacted] is "still angry about how things happened." ([redacted] Interview).

Two months after the Tank Incident, in May 2018, Mrs. [redacted] suffered a miscarriage at around 12 weeks gestation. Mrs. [redacted] stated that the miscarriage "was the worst experience of my life." ([redacted] Interview). She explained that when she went for her 10-week check-up there was no heartbeat and she had to wait weeks before she started miscarrying naturally.

Mrs. [redacted] described the Tank Incident as "very stressful," adding,

> I was pregnant at the time. A few months later, a couple months later, I had a miscarriage, and things got really bad after that. And so they got worse. And worse because obviously I had a miscarriage. Two, I didn't know why I had a miscarriage. I didn't know if it was the stress from all this that was going on or, you know, something wrong with me. And it was just a lot to process, and it took some time.

([redacted] Dep. at 156).

After her miscarriage, Mrs. [redacted] desire to expand her family and her relationship to her body and her frozen eggs intensified and she experienced doubt, anxiety, grief, fear, anger, and depression. She worried that she was not going to be able to get pregnant again because it was taking her longer to conceive than it had in the prior two pregnancies. She felt that she had "jinxed" herself. ([redacted] Interview). As detailed above, the grief experienced after the loss of a much-desired baby is one of the most traumatic life events a woman and couple will experience. (Covington, 2006; Jaffe & Diamond, 2011; Adolfsson 2011; Chojenta et al. 2014 Brier, 2004, 2008; Freda et al., 2003; Robinson, 2011).

Mrs. [redacted] trusted that her eggs were safely stored, indefinitely, in state-of-the-art equipment, and believed the eggs would be safely stored, indefinitely, for future family planning. Mrs. [redacted] understood that there was no limit on how long cells remain viable in the frozen state. Just as cryopreservation is offered as an "insurance policy" to provide peace of mind about fertility options, (Myers, K., 2017), the Tank Incident deprived Mrs. [redacted] of that peace of mind and forever changed her relationship to her eggs and ability to conceive.

According to Mrs. [redacted] her miscarriage, which occurred less than two months after the tank incident, "changed my relationship to my eggs." ([redacted] Interview). She stated, "I felt blessed and fortunate but then after the miscarriage, I started to doubt my fertility and became frustrated and angry that my insurance policy was gone." ([redacted] Interview).

According to Mrs. [redacted] "I paid to have my eggs harvested and available for when I needed them, and they're gone. Those were my 34-year-old eggs, and I can't get them back. My options have been taken from me." ([redacted] Dep. at 143-44).

Mrs. [redacted] shared that she still thinks about her miscarriage every day and wonders "was that my little girl?" ([redacted] Interview). She described the months of trying to conceive after her miscarriage as an emotional roller coaster and the loss of her eggs in the Tank Incident added to her grief and distress. She also described the tremendous anxiety she experienced of trying to be hopeful about getting pregnant again at the same time that she was mourning "the baby we lost." ([redacted] Interview).

The couple was fortunate to conceive naturally again in August 2018 after trying for several months. Mrs. [redacted] gave birth to their second son on May 24, 2019. She recalled that even when they got pregnant, she was "on edge" every time she went to the doctor for an ultrasound and was constantly reminded of when the due date was of her "second child" that she lost. ([redacted] Interview). She described the pregnancy and birth of her youngest son as "traumatic" as she was always anxious about something going wrong. ([redacted] Interview). She explained that she didn't realize the birth would trigger her prior losses and stated, "Even though the delivery was smooth, I didn't realize how traumatic the miscarriage and first birth were for me." ([redacted] Interview).

Mrs. [redacted] acknowledges that she's never felt whole again nor trusted her body after the miscarriage. Mrs. [redacted] stated "I think about the baby. It meant something to me." ([redacted] Interview). She noted that she thinks about the lost child every year on the due date. The Tank Incident and trauma of the miscarriage, which "created a layer of complexity," weigh heavily on Mrs. [redacted] ([redacted] Interview). "If we didn't have the miscarriage, maybe I would have thought about using the eggs, but we needed to close the chapter." ([redacted] Interview). It is never psychologically advisable to make a major life decision in the midst of grief or a life trauma or crisis. But as she explained, "We were already mourning and grieving over our miscarriage." ([redacted] Interview).

g) Undesirable Options

Mrs. [redacted] loss is complicated by the lack of control and uncertainty she faces with regard to her eggs that she so thoughtfully arranged to be kept safely cryopreserved. Mrs. [redacted] limited options not only disrupted this sense of safety, trust, and control but threw her into unplanned and life altering decision making about her family building plans. She has been forced to reconcile that once healthy frozen eggs would have to be thawed, fertilized and transferred or refrozen just to assess viability without guarantee of future survival of the embryo or health of a child. When referring to this option she said, "I had a lot of mixed feelings." ([redacted] Dep. at 92). She was worried that even if the eggs looked viable, "it doesn't mean that they weren't exposed to something that could produce an unhealthy child." ([redacted] Dep. at 92).

Mrs. [redacted] has continued to keep her eggs frozen and lives with the uncertainty of their outcome and not knowing definitively of their viability. The unpredictability of these options has triggered prior feelings of stress, helplessness, loss, and grief from her prior preservation treatment and her miscarriage.

Essentially, Mrs. [redacted] is still in limbo, not knowing how extensively her eggs were affected by the Tank Incident and whether she should properly grieve or remain hopeful that her eggs are viable. She lives with the uncertainty not only of whether her eggs were fully destroyed but the fear of wanting more children one day and having no options.

h) Future Family Building

Mrs. [redacted] is unsure about the reproductive road ahead. As she explained, "I am 42 years old and cannot have any more kids because my eggs are 42. My back up plan is gone and I'm too worried about another miscarriage to try with my eggs." ([redacted] Interview).

Mrs. [redacted] ability to expand her family to include genetically related siblings has been affected. Mrs. [redacted] states, "I have two beautiful children. And the thought if I want more and it doesn't work out, what I paid for to be in place for me is gone." ([redacted] Dep. at 148). She explained her concerns about even testing the viability of the eggs that were in the Tank, "I can't imagine eggs that are being frozen that have risen in temperature being viable and not being compromised." ([redacted] Dep. at 109).

3) Conclusion

Based on my personal interview of Mrs. [redacted] the material reviewed, my education, training, clinical experience, research, and review of peer-reviewed published literature, it is my opinion to a reasonable degree of psychological certainty that the Tank Incident and Mrs. [redacted] resulting loss of family planning flexibility has caused her to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of being out of control, and the experience has triggered feelings associated with previous perinatal trauma. Mrs. [redacted] experience is consistent with the research detailed in this report regarding the fertility preservation process. In sum, Mrs. [redacted] has experienced significant emotional distress and psychological harm and trauma as a result of the Tank Incident.

VI. Opinions Regarding [redacted]

1) Summary of Opinions

As described in this report, I conclude the following regarding Ms. [redacted] to a reasonable degree of professional certainty:

(1) The process of deciding to retrieve and freeze eggs or create embryos as well as the procedures of retrieving and storing eggs were physically, emotionally and financially demanding and stressful for Ms. [redacted]

a. Women make a substantial physical, emotional, and financial investment to obtain eggs and the expectations that great care will be taken to preserve and protect the eggs to avoid harm. Ms. [redacted] made this investment.

b. Patients commonly experience symptoms of anxiety and depression as a result of procedures associated with egg retrieval. Ms. [redacted] experienced difficult emotions such as worry, shame and inadequacy during the decision-making process. She decided to freeze eggs as a backup plan to take responsibility for her future fertility while she continued her search for the right partner.

c. Ms. [redacted] suffered physically and emotionally from the stress and discomfort of the injections and hormones throughout the stimulation and retrieval process that resulted in alienation from friends and coworkers.

d. Although Ms. [redacted] experienced the decision-making process and procedure to freeze eggs as arduous and stressful, and although she was somewhat disappointed with the number of eggs retrieved, she felt that the retrieval increased her ability to have a child and she was optimistic that they would be kept safe for her when she was ready to use them.

(2) The tank failure resulted in significant emotional distress and psychological harm to Ms. [redacted]

a. Cryopreservation and freezer storage services are sold as an "insurance policy" that allows women the freedom to defer having children until they find the right partner, finish their education or pursue careers that could in turn provide peace of mind. Ms. [redacted] believed the storage of her eggs provided her such an insurance policy.

b. Loss of or damage to those eggs—or even the mere possibility of loss or damage—can be traumatic for the person whose eggs are (or were) frozen. Ms. [redacted] experienced trauma as a result of the Tank Incident.

c. The Tank Incident robbed Ms. [redacted] of her "insurance policy" and her oocyte disposition rights, and forced her to contemplate outcomes that were never part of her original decision-making or family building plans when she froze her eggs in the first place.

d. The Tank Incident and Ms. [redacted] resulting loss of family planning

flexibility has caused her to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of inadequacy and being out of control, and the experience has triggered feelings of despair associated with a previous pregnancy termination and low egg yield from fertility preservation.

e. Ms. [redacted] is left grieving the loss of genetic material that represents her sacrifice, struggle, and future family building options.

f. The traumatic stress of the Tank Incident forced her to relive negative feelings concerning a pregnancy termination in January 2013 and low egg yield from fertility preservation, further intensifying her emotional distress and grief, and complicating her relationship to the eggs that were in the Tank. The Tank Incident caused Ms. [redacted] to feel loss of hope, loss of identity, loss of feeling healthy and normal, loss of self-worth, and loss of perceived control as a result of the Tank Incident and the attendant loss of her "insurance policy."

g. As a result of the Tank Incident, Ms. [redacted] has been forced to contemplate making important and immediate reproductive decisions in a short period of time under significant duress, depriving her of the freedom and flexibility she sought when she decided to freeze eggs. The only way to determine whether the eggs she had in the Tank at the time of the incident remained viable, was for Ms. [redacted] to thaw, immediately fertilize, and transfer her eggs. But Ms. [redacted] has no reassurance that the eggs are viable or would result in a healthy embryo and child. She does not know what additional risks attempted pregnancies with Tank 4 eggs may involve.

h. The purpose of cryopreservation was to allow Ms. [redacted] to make safe reproductive choices on her own timeline. Instead, Ms. [redacted] was thrust into a state of emotional distress, confusion, uncertainty, panic, loss, anxiety, anger, fear, and grief as a result of having this important choice taken from her.

2) Evaluation of Ms. [redacted]

Ms. [redacted] is a 42-year-old woman who was born and raised in San Jose, California. In 2001, she worked for six months as a media relations intern for the [redacted] and then worked as an executive assistant in the legal department until 2004. She then briefly worked as an office manager at a start-up company.

Ms. [redacted] graduated from the [redacted] in 2000. She worked at [redacted] from 2005 until her role was eliminated in January 2019, working as an Executive Assistant to the President until 2006, and from 2006 until 2014 as an Executive Assistant to the Executive Vice President of Strategy and Business Development. From 2014-2017, she worked as the Senior Manager of Communications to the Chief Executive Officer and then as Director Head of the Executive Office for Chief Executive Officer until he stepped down in November 2019. She shared that she planned to take a year off after her position

was eliminated but was recruited for a position at [redacted] She has been working as Director of Administration to the CEO at [redacted] since February 2020.

Ms. [redacted] reported that she has never been married. She met her current boyfriend in 2005 through mutual friends and reconnected and started dating him in August 2019. She reported that they have plans to get married and are currently living together and trying to conceive.

a) Psychosocial History

Ms. [redacted] reported that she occasionally smokes socially, has not used illicit drugs, and has no personal history of alcoholism. She said she does not take any prescription medications, although she has previously on occasion taken Valtrex, Zyrtec, supplemental vitamins, and, at times, birth control. ([redacted] Deposition Transcript at 39-40; Dr. Grill Interview of [redacted] She participated in therapy from 2012-2013 after a relationship ended and stated, "I was seeking objective consultation on life in general. . . . I wanted to be married, I wanted to have kids, I wanted — I needed an objective outlet." ([redacted] Dep. at 45). She reported the goals of her therapy were "trying to figure out my next steps, understand my patterns, and learning how to live in the grey." ([redacted] Interview). She reported that she struggled with body dysmorphia when she was 18 years old but indicated that it resolved as she got older and went to college. She has no history of emotional, physical, or sexual abuse.

b) Fertility Preservation

In or around May 2016, Ms. [redacted] froze two eggs at PFC. According to Ms. [redacted] "the doctors said that they were big, strong eggs. I don't know if that was accurate or not, but that's what I was told." ([redacted] Dep. at 56).

Ms. [redacted] explained that her parents initially brought up the idea of fertility preservation in 2013. She did not proceed at that time. But in 2016, she was single and shared that many of her friends were struggling with infertility. As she put it, "I wanted to be proactive. I wanted to buy some insurance." ([redacted] Interview).

She decided to move forward with fertility preservation in 2016, at age 38, after seeing Dr. Givens at PFC who informed Ms. [redacted] that her egg reserves were low. She was advised to "either start trying to conceive naturally or start the egg preservation process." ([redacted] Dep. at 34). Ms. [redacted] explained that she and her parents paid for her fertility preservation. ([redacted] Dep. at 50-51). She noted that she could only do one cycle because of the cost and because "it was just a really emotional, uncomfortable process." ([redacted] Dep. at 52).

She does not have eggs or embryos stored at any other facility.

c) Motivations to Preserve Fertility

Ms. [redacted] reported that she always wanted to have children. Just as most women freeze eggs because they are single and looking for a suitable and healthy long-term partner with whom to have children, (Baldwin et al. 2015; Greenwood, Pasch, and Huddleston 2017; Hodes-Wertz et al. 2013; Seyhan et al. 2017; Stoop, Nekkebroeck, and Devroey

2011), Ms. [redacted] decided to freeze her eggs when she was 38 years old and did not have a partner. She "thought it was time to buy myself some insurance and freeze my eggs for future use, if necessary." ([redacted] Dep. at 36). She explained that she is a "glass-half-full type of person" and hoped that when she found the right partner and was ready to start a family, she would be able to conceive naturally. The fertility preservation was a "just-in-case scenario." ([redacted] Dep. at 48).

Consistent with the research of fertility preservation after a relationship breakup, (Myers, K., 2017; Inhorn et al., 2018), Ms. [redacted] viewed the preservation process as a chance to preserve her reproductive options and move on from an "on again, off again" relationship she had been in for most of her reproductive years (since college). She shared that the person she was with "promised the world but nothing changed so I had to do this on my own and freeze my eggs." ([redacted] Interview).

Ms. [redacted] acknowledged that finding the right partner and anxieties about becoming a single mother, two very common motivations for egg freezing, (*see, e.g.*, Myers et al. 2015; Waldby 2015; Inhorn M., et al., 2018), were reasons why she pursued fertility preservation. In her words, "I hadn't found the right partner and never intended to have a child on my own but who knows. I don't want to conceive with a donor so I thought I would buy some insurance until I met the right person." ([redacted] Interview).

Similar to research about life course expectations, (*see, e.g.*, Culley et al. 2013; Loftus and Andriot 2012; Baldwin, K., 2018), Ms. [redacted] felt a deep sense of grief and shame about where she thought she would be in her life at the time she was exploring the fertility preservation process. She explained that "you do things in order" and when she found herself aging with no partner, she felt that "everything in my life was up in the air." ([redacted] Interview). She explained that at the time she froze eggs she felt, "This sucks that I'm here. No one wants to do this. But I was single. I'm not dramatic or 'woe is me' but no one wants this to be their story." ([redacted] Interview).

d) Physical, Emotional, Financial, and Social Impact of Fertility Preservation

The research detailed above about distress during the fertility preservation process is consistent with Ms. [redacted] described experience. (*See, e.g.*, Benyamini V., et al., 2005). She remembered the process being "terrible." She reported that the medications made her bloated and emotional. She recalled being "irritable" and "snapping at people." ([redacted] Interview). The fertility preservation process impacted her social life and work as well. She stopped seeing people socially because she had to be home to administer shots and was irritable all the time. She indicated that people at work noticed the changes and stated, "No one at work wanted to talk to me." ([redacted] Interview). When the cycle was over, her boss at the time commented, "I can see clearly in your eyes again." ([redacted] Interview).

Ms. [redacted] explained that the most difficult aspect of the preservation process was "receiving bad news every few days when I went into the clinic for monitoring." ([redacted] Interview). When it became clear that Ms. [redacted] was not producing as many eggs as she had hoped, she said, "It wasn't what I wanted to hear and I was beating myself up for

something that wasn't even my fault." ([redacted] Interview). She stated, "I felt like less than a woman." ([redacted] Interview).

While she acknowledges that the fertility preservation process, especially the hormones, was "terrible," she noted that she is glad she did it and wishes that she could have afforded to do another cycle. ([redacted] Interview). She was disappointed that she only had two eggs to freeze but was also optimistic, stating, "It only takes one." ([redacted] Interview). She also said that "I was excited that I had two viable eggs frozen. It was more eggs that I had before the procedure." ([redacted] Dep. at 85).

e) Family Building History

Ms. [redacted] reported that she terminated a pregnancy in January 2013. She explained that she ended the pregnancy because it "wasn't the right time or person in my life. At the time, it was the right choice for me." ([redacted] Dep. at 21). She described the relationship she was in at the time as "on and off" since 2011 and noted that the relationship ended two months after the abortion, in March 2013. ([redacted] Dep. at 18). She had conflicting feelings about the termination even at that time, because Ms. [redacted] knew she wanted to have children. ([redacted] Dep. at 19, 21).

At age 38, having not yet found the right partner, Ms. [redacted] decided to freeze her eggs for future use. That "insurance policy" afforded Ms. [redacted] some peace of mind.

f) The Tank Incident and Associated Perinatal Loss

Ms. [redacted] experience after the Tank Incident is consistent with the research described above. Infertility, miscarriage, stillbirth, termination, or other perinatal trauma cause feelings of loss not just for the longed-for child but also what that longed-for child represents: loss of self-worth, loss of where they thought they would be at this point in their lives, loss associated with watching friends and coworkers expand their families, loss of hope, loss of identity, the loss of feeling healthy and normal, and loss of perceived control. (Cousineau and Domar, 2006; Jaffe & Diamond, 2011; Jaffe, Diamond, & Diamond, 2005). Ms. [redacted] experienced many similar emotions after the Tank Incident.

Ms. [redacted] learned about the Tank Incident from an email sent by the clinic. She remembered feeling "numb" and noted that at first, she "compartmentalized" the information. ([redacted] Interview). She explained, "I am an internalizer and it takes me a while to process." ([redacted] Interview). As the days passed, her feelings changed to "anger and sadness." ([redacted] Interview; [redacted] Dep. at 115).

She understood, based on speaking with Dr. Givens, that Ms. [redacted] eggs (and other eggs in the tank at the time of the Incident) would likely not be viable. ([redacted] Dep. at 74). She described a "mourning process of the fact that I went through this, you know, somewhat traumatic experience to buy myself some insurance. And then that insurance was destroyed." ([redacted] Dep. at 77 (cleaned up)). She stated, "it was emotional. It was sad. It was just a very sad moment in time." ([redacted] Dep. at 77). She noted that her family, friends, and coworkers were supportive during this difficult time.

Ms. [redacted] trusted that her eggs were safely stored, indefinitely, in state-of-the-art equipment for her to use if she couldn't conceive naturally. Ms. [redacted] understood that

there was no limit on how long cells remain viable in the frozen state. Just as many women freeze their eggs as a multifaceted means of risk management, (Myers, K., 2017), Ms. [redacted] made it clear that she froze eggs to provide peace of mind about fertility options.

The Tank Incident deprived Ms. [redacted] of that peace of mind. According to Ms. [redacted] "Something was taken from me—an opportunity to conceive that I invested in. Those were my 38-year old eggs and now I am 42." She stated, "Two eggs are more than zero. Those were my hope." ([redacted] Interview; [redacted] Dep. at 87).

She remains angry and struggling with feelings of grief over the loss of her eggs. She strongly feels that "no one should go through this," and explained, "It's personal and tied to one's self worth. I went into this thinking everything would be okay." ([redacted] Interview). She stated, "I want to be made whole again." ([redacted] Interview).

She feels "haunted" by the Tank Incident that has triggered feelings of loss, failure, hopelessness, grief and inadequacy related to her previous termination as well as the fertility preservation process and outcome. ([redacted] Interview; [redacted] Dep. at 77, 114-15).

She recalled in her own words:

> Going through the fertility process was tough. . . . I had to relive the entire experience all over again [with the Tank Incident]. And with that I had to — I had to go through the emotional pain of not feeling like adequate enough as a woman because I only produced two eggs. I went through the emotional pain of having terminated a pregnancy a few years before. . . .
>
> [F]eeling inadequate about being a woman and, you know, going through the process and only having two eggs that were frozen, it's — it's something that I never thought would make me feel —I never thought there would be anything that would make me feel that inadequate. . . . [W]hen you learn that your egg reserves are low and you have two eggs in a tank and that those eggs were taken away, it just brings back, you know, kind of where you are in your fertility process. Because like I said in the beginning, I want to have children, and this is just a reminder of — of where — where I am today. . . . I'm just sad and mad.

([redacted] Dep. at 77, 114-16).

The anxiety and grief related to her fertility options is palpable. She feels both despair because she lost the eggs in the Tank Incident, and renewed despair and conflicting feelings about the abortion she had in 2013 which she now believes may have terminated her best opportunity at a healthy pregnancy. Ms. [redacted] acknowledges that she thinks about her lost eggs every day. She is "aware of the challenges" of having children in the future and explained that her Anti-Mullerian hormone ("AMH") is low and understands that this has negative implications for her fertility. She wishes that she could forget about her painful reality and stated, "knowledge is not necessarily power. I wish I could be blind to this reality." ([redacted] Interview). The person who once described herself as a "glass half full" person, ([redacted] Dep. at 48), now says, "The glass is half empty." ([redacted]

Interview). She explained, "Fertility is about womanhood. I now feel like I am not good enough as a woman. I feel like a failure." (Interview). She stated, "My life didn't go as planned and continues to be a conversation that is not private. It's a constant reminder." (Interview).

g) Undesirable Options

Ms. loss is complicated by the lack of control and uncertainty she faces with regard to her eggs that she so thoughtfully arranged to be kept safely cryopreserved. Ms. limited options disrupted this sense of safety, trust, and control. She has been forced to reconcile that once healthy frozen eggs would have to be thawed, fertilized and transferred or refrozen just to assess viability without guarantee of future survival of the embryo or health of a child.

Ms. has continued to keep her eggs frozen and lives with the uncertainty of not knowing definitively whether they are viable. The unpredictability of these options has triggered prior feelings of stress, helplessness, loss, and grief. She stated, "I had to relive everything again and it was a double blow. I had to think about my abortion, the preservation cycle. These are moments in time, I didn't want to ever have to think about again and now I have to relieve it over and over again and worry about if I will ever hold my own baby." (Interview).

Essentially, Ms. is still in limbo, not knowing how extensively her eggs were affected by the Tank Incident and whether she should properly grieve or remain hopeful that her eggs are viable. She lives with the uncertainty not only of whether her eggs were fully destroyed but the fear of not being able to conceive naturally and having no other options.

h) Future Family Building

Ms. reported that she is trying to conceive naturally with her current boyfriend. She noted that having "biological children" is very important to him and because of age (as she is now 42 years old), she feels that they will have to move quickly. (Dep. at 22-23). She noted that they plan at this time to try to conceive naturally and then plan to make an appointment to see a fertility doctor at UCSF if they are not pregnant. Ms. indicated that she is willing to try IVF if they cannot conceive naturally and would be willing to consider donor eggs in the future if IVF doesn't work.

3) Conclusion

Based on my personal interview of Ms. the material reviewed, my education, training, clinical experience, research, and review of peer-reviewed published literature, it is my opinion to a reasonable degree of psychological certainty that the Tank Incident and Ms. resulting loss of family planning flexibility has caused her to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of inadequacy and being out of control, and the experience has triggered feelings of despair associated with a previous pregnancy termination and low egg yield from fertility preservation. Ms. experience is consistent with the research detailed in this report regarding the fertility preservation

process. In sum, Ms. [redacted] has experienced significant emotional distress and psychological harm and trauma as a result of the Tank Incident.

VII. Opinions Regarding [redacted]

1) Summary of Opinions

As described in this report, I conclude the following regarding Ms. [redacted] to a reasonable degree of professional certainty:

(1) The process of deciding to retrieve and freeze eggs or create embryos as well as the procedures of retrieving and storing eggs were physically, emotionally and financially demanding and stressful for Ms. [redacted]

a. Women make a substantial physical, emotional, and financial investment to obtain eggs and the expectations that great care will be taken to preserve and protect the eggs to avoid harm. Ms. [redacted] made this investment.

b. Patients commonly experience symptoms of anxiety and depression as a result of procedures associated with egg retrieval. Ms. [redacted] experienced difficult emotions such as worry, shame and loss during the decision-making process. She decided to freeze eggs with PFC as a backup plan to take responsibility for her future fertility while she continued to work on her relationship with her boyfriend at the time.

c. Ms. [redacted] suffered physically and emotionally from the stress and discomfort of the injections and hormones throughout the stimulation and retrieval process that resulted in alienation from friends and coworkers.

d. Ms. [redacted] viewed the eggs she stored at PFC as an "insurance policy." Because she desired additional cryopreserved eggs following her cycle with PFC, she went through a second cycle in 2018, this time at UCSF. She decided to retrieve eggs to ensure she could build a family in the future.

e. Although Ms. [redacted] experienced the decision-making process and procedure to freeze eggs as arduous and stressful, she was still pleased that she stored eggs with the understanding that they would be kept safe for her when she was ready to use them.

(2) The tank failure resulted in significant emotional distress and psychological harm to Ms. [redacted]

a. Cryopreservation and freezer storage services are sold as an "insurance policy" that allows women the freedom to defer having children until they find the right partner, finish their education or pursue careers that could in turn provide peace of mind. Ms. [redacted] believed the storage of her eggs provided her such an insurance policy.

b. Loss of or damage to those eggs—or even the mere possibility of loss or damage—can be traumatic for the person whose eggs are (or were) frozen. Ms. [redacted] experienced trauma as a result of the Tank Incident.

c. The Tank Incident robbed Ms. [redacted] of the insurance provided by the nine eggs that were stored in Tank 4 at the time of the incident, which she

preserved before she turned 35, in addition to her oocyte disposition rights, and forced her to contemplate outcomes that were never part of her original decision-making or family building plans when she froze her eggs in the first place.

d. The Tank Incident and Ms. [redacted] resulting loss of family planning flexibility have caused her to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of being out of control, and the experience has triggered feelings associated with past relationship issues and her overall experience freezing eggs at PFC.

e. Ms. [redacted] is left grieving the loss of genetic material in the Tank that represents her sacrifice, struggle, and future family building options.

f. In addition, the Tank Incident contributed additional stress and pressure to the fertility preservation cycle Ms. [redacted] was undergoing at UCSF at the time and triggered negative feelings from her first preservation cycle at PFC and the relationship she was in at the time she froze. This intensified her emotional distress and grief and complicated her relationship to the eggs that were in the Tank. Ms. [redacted] felt loss of hope and loss of perceived control as a result of the Tank Incident and the attendant loss of her "insurance policy."

g. As a result of the Tank Incident, Ms. [redacted] has been forced to contemplate making important and immediate reproductive decisions in a short period of time under significant duress, depriving her of the freedom and flexibility she sought when she decided to freeze eggs. The only way to determine whether the eggs she had in the Tank at the time of the incident remained viable, was for Ms. [redacted] to thaw, immediately fertilize, and transfer her eggs. But Ms. [redacted] has no reassurance that the eggs are viable or would result in a healthy embryo and child. She does not know what additional risks attempted pregnancies with Tank 4 eggs may involve. Ms. [redacted] has therefore been effectively deprived of the 9 eggs that were retrieved when she was 34 that were stored in Tank 4.

h. The purpose of cryopreservation was to allow Ms. [redacted] to make safe reproductive choices on her own timeline. Instead, Ms. [redacted] was thrust into a state of emotional distress, confusion, uncertainty, panic, loss, anxiety, anger, fear, and grief as a result of having this important choice taken from her.

2) Evaluation of Ms. [redacted]

Ms. [redacted] is a 38-year old woman who was born in London, England and moved to San Francisco in 1989. She graduated from college in 2006 with a BA degree in international studies and anthropology. After college, she worked at a fellowship and then worked for the [redacted] From 2009-2011, she earned her

master's degree in public policy at [redacted] After receiving her master's degree, she worked for a non-profit organization and in 2015, she started her own company, [redacted] a human rights consulting business. She noted that she feels fortunate to be self-employed and working in an area that she loves.

Ms. [redacted] was married to [redacted] from 2001-2009 and reported that the marriage ended because he had an affair. She was then in a serious relationship with [redacted] from 2010-2017. She met Mr. [redacted] in graduate school and reported that they "couldn't make it work" when he took a job in another state and she did not want to move away from her extended family. While she has been dating since then, she reported that she has not been in any serious relationships.

a) Psychosocial History

Ms. [redacted] reported that she does not smoke or use illicit drugs and has no personal history of alcoholism. She noted that she participated in therapy from 2016-2018 and in 2020. While in her relationship with Mr. [redacted] she began therapy to discuss their relationship issues; after her breakup with Mr. [redacted] she was concerned "about not having a family" and wanted to continue to focus on relationship issues in therapy. (Dr. Grill Interview of [redacted]

She reported that she was diagnosed with anxiety after the Tank Incident and started seeing a psychiatrist who prescribed Zoloft in 2018. She explained, "After the Tank failure, I was really freaking out about not having a child and the medication took the edge off of thinking about it all the time." ([redacted] Interview). She noted that she is currently taking half of the therapeutic dose and reported that she recently started therapy again to work on issues related to a complicated relationship with her father and to discuss having a child on her own. ([redacted] Interview).

b) Fertility Preservation

In or around May 2016, Ms. [redacted] froze approximately nine eggs at PFC. Ms. [redacted] shared that she was in a relationship with Mr. [redacted] at the time that she decided to freeze eggs at PFC. She explained that the relationship was fragile, and that they were not in a good place to start a family. She stated, [redacted] and I were talking about breaking up and didn't want the issue of fertility to play into the decision." ([redacted] Interview). She added, "He's a guy and younger than me so he agreed that I should go freeze eggs." ([redacted] Interview). According to a note on 8/17/2016, Dr. Givens wrote that 9 of the 18 eggs retrieved were mature for vitrification. (PLTF-EF-000139).

Ms. [redacted] explained that she froze her eggs "to preserve my ability to have children and to basically take out an insurance policy on it before I turned 35, which was when I understood fertility to decline significantly." ([redacted] Deposition Transcript at 115). Ms. [redacted] was deliberate and proactive about preserving options for her future fertility. She stated, "I've wanted to be a mom my whole life. It's a huge desire of mine. And I wouldn't want that to be taken away from me in any way." ([redacted] Dep. at 45).

At the time of the Tank Incident, Ms. [redacted] was undergoing fertility preservation at UCSF. Shortly after the Incident, in April 2018, Ms. [redacted] froze approximately 15 eggs at UCSF to add to the insurance policy represented by her 9 PFC eggs.

c) Motivations to Preserve Fertility

Ms. [redacted] acknowledged "I've always wanted to be a mom and that continues to be the case." ([redacted] Dep. at 43). Ms. [redacted] reported that her main motivation for freezing eggs was to "preserve my ability to have a child" and to "give myself more time." ([redacted] Dep. at 40, 44). She understood that there were no guarantees but stated, "this was a really good insurance plan." ([redacted] Dep. at 51). Ms. [redacted] made it clear that she went to PFC "specifically to extend my fertility, not to try and conceive naturally at that point." ([redacted] Dep. at 67). In her own words, "I was sold on the dream and future protection of that dream." ([redacted] Interview).

Consistent with the research on fertility preservation as a way of managing current relationships that are not ready to move forward with family building, (Myers, K., 2017), Ms. [redacted] acknowledged that she was working through issues with her boyfriend at the time, Mr. [redacted] She stated, "We wanted kids together. We had names picked out. We always wanted kids." ([redacted] Interview). At the same time, she explained, "We were talking about whether we were going to stay together." ([redacted] Interview). Ms. [redacted] admits that part of her "wishes that I just got pregnant" but noted, "I would have been alone, and he would have been pursuing his job in Boston." ([redacted] Interview).

Consistent with the research, (Myers, K., 2017; Myers et al. 2015; Waldby 2015), Ms. [redacted] felt that she was at a disadvantage because she did not have the luxury of biological time on her side and was acutely aware of the fact that her partner did not have the same reproductive constraints, stating, "how unfair it was that if we broke up, his chance of being able to have a child wasn't reduced because of age, whereas mine was." ([redacted] Dep. at 41). At the time, Ms. [redacted] still wanted to work on the relationship with Mr. [redacted] and freezing her eggs was a way to manage the risk of future infertility and a potential future break up. She stated that when she froze eggs at PFC, "it was really sad" and explained, "I was angry that I had to do this and was the only one who had to bear the brunt of this. The experience was terrible." ([redacted] Interview).

When she underwent fertility preservation at UCSF, she shared that she felt "much more empowered." ([redacted] Interview). She explained, "It felt like more of a choice and was icing on the cake because I knew that I already had nine eggs frozen at PFC," and she could add to the number of eggs she had available. ([redacted] Interview). During her egg freezing cycle at UCSF, she found out about the Tank Incident. She described the rest of her cycle as "terrifying" and explained, "I became obsessed over doing everything right and getting as many eggs as possible. I even asked UCSF to change the medical protocol so I could produce as many eggs as possible and asked that the eggs be stored in multiple tanks." ([redacted] Interview).

d) Physical, Emotional, Financial, and Social Impact of Fertility Preservation

Ms. [redacted] was aware of the stress related to the fertility preservation process but was committed to preserving her future fertility. In her own words, "My understanding was that it would be a process that was pretty invasive, that it would be physically and emotionally challenging, but that it would increase my kind of insurance policy or chance to have a live birth later in life." ([redacted] Dep. at 59).

The research detailed above about distress during the fertility preservation process is consistent with Ms. [redacted] described experience. (Greenwood et al., 2018; Pasch et al. 2016). She remembered the process being "terrible." ([redacted] Interview). She reported that the medications made her uncomfortable and emotional. She recalled that physically, the process was grueling and stated, "stabbing yourself with needles is not fun." ([redacted] Interview). She felt like she was "carrying a bowl of pebbles in my stomach" and added, "my whole stomach was black and blue." ([redacted] Interview). Emotionally, she remembered feeling "really sad" and "easy to cry." ([redacted] Interview).

She relied mostly on her mom for support during the preservation process and stated, "I talked about how scared I was of using the needles. I talked about the physical side effects. I talked about the emotional side effects, how I was very irritable. [redacted] and I got into a lot of fights. I was crying. I felt anxious. I was nervous to be put under." ([redacted] Dept. at 67-68).

The fertility preservation cycles were financially stressful as well. Ms. [redacted] disclosed that she paid out of pocket for both egg freezing procedures. Mr. [redacted] split the cost of the first cycle with her but they had to save money for the procedure and Ms. [redacted] explained that "it was a big financial decision and we would have done it sooner if we had the money." ([redacted] Interview). She noted that she was more financially stable when she froze eggs the second time at UCSF.

The process of freezing her eggs at PFC was, according to Ms. [redacted] taxing on her relationships. She explained that with regard to Mr. [redacted] the process was a "a very real representation of where our relationship was—that we were actually postponing building a family together." ([redacted] Interview). She described the first egg freezing process as "isolating" and noted that she was "in need of community but was stuck on my own." ([redacted] Interview). The cycle also affected her work. She noted that she had to take time off because "so much of my brain was taken up by this and I couldn't focus on anything." ([redacted] Interview). The cycle also caused tension with her business partners because Ms. [redacted] felt she was was "not pulling my weight." ([redacted] Interview).

e) The Tank Incident and Associated Loss

Ms. [redacted] experience after the Tank Incident is consistent with the research described above. Infertility, miscarriage, stillbirth, termination, or other perinatal trauma cause feelings of loss not just for the longed-for child but also what that longed-for child represents: loss of self-worth, loss of where they thought they would be at this point in

their lives, loss associated with watching friends and coworkers expand their families, loss of hope, loss of identity, the loss of feeling healthy and normal, and loss of perceived control. (Cousineau and Domar, 2006; Jaffe & Diamond, 2011; Jaffe, Diamond, & Diamond, 2005). Ms. [redacted] experienced many similar emotions after the Tank Incident.

Ms. [redacted] learned about the Tank Incident while she was in the middle of an egg freezing cycle at UCSF. The news of the Tank Incident had profound effects on her physical and emotional wellbeing as well as her relationships with friends and family. She remembered feeling "confused, devastated, scared, and in disbelief" and "cried all morning" after she heard the news. ([redacted] Interview). She reported that her mother came to stay with her because she was having nightmares and was "screaming in my dreams." ([redacted] Interview).

Ms. [redacted] explained that her "insurance policy was taken away from me. And because of that, I suffered physical harm associated with the actual treatment that was pointless and for nothing. And then emotional harm, as I'm sure everyone has, in terms of feeling like something I am being proactive about avoiding was now out of my control, and my chance of having a child was reduced." ([redacted] Dep. at115).

After learning about the Tank Incident she became "isolated" and "withdrew from everyone except my mom." ([redacted] Interview). She explained that the incident was really hard on her friendships and noted that she texted friends that she could no longer participate in kid related group chats. The news of the Tank Incident also took a toll on her body.

Ms. [redacted] explained that the Tank Incident created extra stress with the egg freezing cycle that she was in the middle of at UCSF and stated, "The rug was pulled out from underneath me and instead of feeling like I was building a future, I felt stuck in quick sand." ([redacted] Interview). She noted that she became disconnected from the second freezing cycle because she no longer trusted that the eggs would be safe and worried that, "maybe these will be taken from me too." ([redacted] Interview).

When Ms. [redacted] froze her eggs at PFC, she trusted that they were safely stored, indefinitely, in state-of-the-art equipment, and believed the eggs would be safely stored, indefinitely, for her to use if she couldn't conceive naturally. She is upset that she has to "fight for this" and stated, "We shouldn't have to fight for our families. This was horrific and cannot happen again. Our families were held in that tank. You can't just say, 'whoops, our tank failed.'" ([redacted] Interview).

Ms. [redacted] understood that there was no limit on how long cells remain viable in the frozen state. Just as many women freeze their eggs as a multifaceted means of risk management, (Myers, K., 2017), she made it clear that she froze eggs as an "insurance policy" to provide peace of mind about fertility options. The Tank Incident deprived Ms. [redacted] of that peace of mind. In her own words, "I get that bad things happen, but I was doing everything right. I was being proactive, and they were destroyed." ([redacted] Interview).

The Tank Incident has triggered feelings of loss, failure, hopelessness, and grief, as well as inadequacy related to her break-up with Mr. [redacted] her prior fertility preservation process at PFC, and her future family building options. She recalled in her own words "The Tank Incident was retriggering. I thought about [redacted] I thought about the fact that I was single, not in a relationship, in the middle of an egg freezing cycle and now, without an insurance policy." ([redacted] Interview).

According to Ms. [redacted] the eggs stored at PFC were more than just an insurance policy. Consistent with the research establishing that attachment to a future child happens well before the birth of that child and a psychological parenthood exists long before the physical reality of a pregnancy, (Covington, 2006; Jaffe et al., 2011), she stated, "They were my future, they were my family on pause." ([redacted] Interview). She explained that at the time, she and Mr. [redacted] named the frozen eggs "little Elsas" because the movie Frozen had just been released. The eggs frozen at PFC were tied to a significant relationship and represented her future. She stated, "Those eggs were my future babies." ([redacted] Interview).

f) Undesirable Options

Ms. [redacted] loss is complicated by the lack of control and uncertainty she faces with regard to the eggs that she so thoughtfully arranged to be safely cryopreserved. Ms. [redacted] limited options disrupted this sense of safety, trust, and control. She has been forced to reconcile that once healthy frozen eggs would have to be thawed, fertilized and transferred or refrozen just to assess viability without guarantee of future survival of the embryo or health of a child.

Ms. [redacted] has continued to keep her eggs frozen and lives with the uncertainty of their outcome and not knowing definitively of their viability although she recalls initially being told by PFC that "none of my eggs were viable." ([redacted] Interview). The unpredictability of these options has triggered prior feelings of stress, helplessness, loss, and grief from her prior preservation treatment, her break up with Mr. [redacted] and her future family building options.

Essentially, Ms. [redacted] is still in limbo, not knowing how extensively her eggs were affected by the Tank Incident and whether she should properly grieve or remain hopeful that her eggs were unaffected. She lives with the uncertainty not only of whether her eggs were fully destroyed but the fear of not being able to conceive naturally. Operating under the assumption that her eggs are not viable, Ms. [redacted] grieved and continues to grieve their loss.

g) Future Family Building

Ms. [redacted] still feels substantial anxiety about her family building plans because of the Tank Incident. In her own words, "If I had 25 eggs frozen, I would feel confident about having a family and providing siblings to a child. If I had 25 eggs, I would want two more years to find a partner. But now that my eggs at PFC are gone, I feel that I need to try to have a child with my eggs now." ([redacted] Interview).

Ms. [redacted] reported that in the next year, she feels that she has to try to get pregnant on her own through inseminations using anonymous donor sperm or a known donor. She feels pressure to try and conceive because of her age, "biological clock," and number of frozen eggs she has left to build a family. She shared that she is thinking through practical issues related to her finances and support system and still questions whether she is making the right decision or should continue dating to try and find a partner. She indicated that her mother is willing to help her if she decides to become a single mother and she is talking more openly with people in her life "so it feels more natural." ([redacted] Interview). She noted that she is currently working with a therapist to discuss issues related to having a child on her own and stated, "It's terrifying to think about doing it alone but the idea of not having kids feels worse." ([redacted] Interview).

3) Conclusion

Based on my personal interview of Ms. [redacted] the material reviewed, my education, training, clinical experience, research, and review of peer-reviewed published literature, it is my opinion to a reasonable degree of psychological certainty that the Tank Incident and Ms. [redacted] resulting loss of family planning flexibility has caused her to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of inadequacy and being out of control, and the experience has triggered negative feelings from her first preservation cycle at PFC and the relationship she was in at the time she froze. Ms. [redacted] experience is consistent with the research detailed in this report regarding the fertility preservation process. In sum, Ms. [redacted] has experienced significant emotional distress and psychological harm and trauma as a result of the Tank Incident.

VIII. Opinions Regarding [redacted]

1) Summary of Opinions

As described in this report, I conclude the following regarding Mr. and Mrs. [redacted] to a reasonable degree of professional certainty:

(1) The diagnosis of infertility and its treatment including IVF is physically, emotionally socially, and financially demanding and stressful.

a. Couples make a substantial physical, emotional, and financial investment to obtain embryos and have expectations that great care will be taken to preserve and protect the embryos to avoid harm. Mr. and Mrs. [redacted] made this investment.

b. Patients commonly experience symptoms of anxiety and depression as a result of the IVF experience. Having interviewed Mr. and Mrs. [redacted] and having examined their histories, my professional opinion is that Mr. and Mrs. [redacted] experienced difficult emotions such as worry, grief, shame, helplessness, guilt, diminished sense of self-worth, and feelings of being out of control during the infertility and treatment process.

c. Mrs. [redacted] suffered physically and emotionally from the stress and discomfort of the injections and hormones throughout the stimulation and retrieval process including complications of Ovarian Hyperstimulation Syndrome ("OHSS").

d. Mr. [redacted] suffered physically and emotionally from the stress and discomfort of varicocelectomy and testicular sperm extraction ("TESE") surgeries that he underwent to increase and harvest sperm.

e. Although the [redacted] experienced the infertility process and procedures as arduous and stressful, prior to the Tank Incident they were pleased with the outcome and felt that their embryos would be kept safe for them when they were ready to use them.

(2) The tank failure resulted in significant emotional distress and psychological harm to the [redacted]

a. Cryopreservation of embryos allows couples to plan their family building over time which provides peace of mind.

b. Loss of or damage to those embryos—or even the mere possibility of loss or damage—can be traumatic. I have concluded that the [redacted] experienced significant trauma as a result of the Tank Incident.

c. The Tank Incident robbed the [redacted] of their family building plans and embryo disposition rights and forced them to contemplate outcomes that were never part of their original decision-making plans when they froze their embryos in the first place.

d. The Tank Incident and the [redacted] resulting loss of the ability to plan their

family as desired has caused them to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of being out of control. The experience has triggered feelings of distress associated with previous IVF treatment and perinatal trauma.

e. Mr. and Mrs. [redacted] are left grieving the loss of genetic material that represents their sacrifice, struggle, genetic connection to their children, and future family building plans.

f. As a result of the Tank Incident, the [redacted] were forced to make important and immediate reproductive decisions in a short period of time under significant duress. The only way to determine whether the embryos they had in the Tank at the time of the incident remained viable was for the couple to thaw and transfer them. The [redacted] promptly attempted transfer, and of the three embryos from the tank that were initially thawed, they accepted that two were deemed non-viable but attempted to transfer the third embryo in May 2018. That attempt was ultimately unsuccessful.

g. Their fourth and final embryo in the tank at the time of the Tank Incident was thawed, and although the [redacted] were advised against attempting transfer given the almost complete lack of viable cells, the [redacted] insisted on attempting the transfer. That transfer, which took place in September 2018, was also unsuccessful. As detailed below, the [redacted] each experienced significant emotional distress and trauma as a result of the Tank Incident.

h. The purpose of cryopreservation was to allow the couple to make safe reproductive choices on their own timeline. Instead, as detailed below, the couple was thrust into a state of significant emotional distress, confusion, uncertainty, panic, loss, anxiety, anger, fear, and grief as a result of having their important choice and family building plans taken from them.

2) Evaluation of Mr. and Mrs. [redacted]

Mrs. and Mr. [redacted] now age 37 and 38 respectively, were both born and raised in Ohio. They started dating in 2001 and were married in 2005. They have a son, age six, and a daughter, age three, who were conceived through IVF at PFC, and which were both from the same egg retrieval cycle that produced the embryos involved in the Tank Incident. The [redacted] reported that they both graduated from high school and completed some college. Mrs. [redacted] worked as a secretary and helped with payroll at a hair salon, but left that position when she had her daughter. Mr. [redacted] has been farming since he was 14-years old and currently runs a non-GMO corn and soy bean farm, and also works as a rural postal service carrier.

a) Psychosocial History

Mr. and Mrs. [redacted] reported that they do not smoke or use illicit drugs. Mr. [redacted] shared that he drinks socially a few times a week. Mrs. [redacted] noted that she drinks

approximately one time a week. They have no personal history of alcoholism or mental illness. Mrs. [redacted] reported that she participated in therapy after her parents were divorced during her high school years and a few times while she was dating Mr. [redacted] Mr. [redacted] noted that he briefly saw a therapist and took Lexapro for approximately 2 weeks after a short break up with Mrs. [redacted] in 2003. The couple has not taken any other prescription medications. The [redacted] each noted that they have suffered with depression and anxiety related to the Tank Incident. They have no history of emotional, physical or sexual abuse, and each noted that their miscarriage and the Tank Incident were the most traumatic events in their lives.

b) Family Building History

Mrs. [redacted] reported that she stopped taking birth control in 2007 and the couple tried to conceive naturally from 2008-2010. Mrs. [redacted] stated that friends at their church referred them to a family building class for Catholic couples. She shared that the class helped her figure out how to map her irregular ovulation cycles. She indicated that she eventually sought medical help because she was having 50-day menstruation cycles.

In 2010, Mrs. [redacted] was diagnosed with Polycystic Ovarian Syndrome ("PCOS"), which causes ovulation irregularities, and Mrs. [redacted] was prescribed Metformin.

In 2011, Mr. [redacted] was diagnosed with a Y-chromosome microdeletion in the C region, a degenerative condition that causes zero to low sperm count. In or around 2011 or 2012, Mr. [redacted] froze sperm in Ohio, took medication to improve sperm count, and had a varicocele surgery. In 2012, the couple pursued an IVF cycle with testicular sperm extraction ("TESE") in Cincinnati, Ohio but noted that the TESE was unsuccessful and the cycle was cancelled and resulted in Mrs. [redacted] suffering with Ovarian Hyperstimulation Syndrome ("OHSS"). Mr. [redacted] stated, "We always hoped for a simple fix and things just kept getting more complicated." (Dr. Grill Interview of [redacted]

Mr. [redacted] noted that they were ready to give up in 2012 but found hope again after consulting with Dr. Schlegel at Weill Cornell Medical College in New York and Dr. Turek in San Francisco. ([redacted] Deposition Transcript at 23-24). Dr. Turek's lab was able to find sperm in Mr. [redacted] sample and referred the couple to Dr. Schriock at PCF. [redacted] Dep. at 24-25). In 2013, the couple made three trips to San Francisco to bank sperm.

In August 2013, the couple completed an IVF cycle at PFC and were able to find sperm without performing another TESE procedure. Approximately 22 eggs were retrieved, 17 fertilized, and seven embryos were frozen. [redacted] Dep. at 41-43). They used one of the embryos in 2013 and cryopreserved the remaining six. Their son was born on [redacted] from a fresh transfer on 9/1/2013. Their daughter was born on [redacted] from a frozen embryo transfer on 4/13/16. Mrs. [redacted] reported that she had gestational diabetes during her first pregnancy and low amniotic fluid during her second pregnancy. ([redacted] Deposition Transcript at 114-15). She described how much she enjoyed and appreciated being pregnant. She "savoured and appreciated every moment of each pregnancy despite the nausea, being tired, and the gestational diabetes. I relished that

time and grieve not being pregnant again. I am in awe of it." (Dr. Grill Interview of [redacted]

Between conceiving their two children, on 9/14/15, they attempted a frozen transfer that resulted in a miscarriage. They named the child they miscarried and shared that it was experienced as a traumatic event. Mrs. [redacted] recalled, "I remember the day the blood started running . . . it was devastating." [redacted] Interview). While crying, she stated, "The grief of knowing that one had passed away. That was my baby [redacted]." [redacted]. Mr. [redacted] shared that he processed his grief by dedicating an Ironman that he participated in to [redacted] Interview).

c) Physical, Emotional, Financial, and Social Impact of Infertility and IVF Treatment

The research detailed above about distress related to infertility and the IVF process, (*see, e.g.*, Rooney et al., 2018; Norre J et al., 2011; Freeman et al., 1985; Domar, A., et al., 1993; Kahn et al., 2019), is consistent with the [redacted] described experience. Overall, the [redacted] experienced their medical treatment as demanding, intrusive, and all consuming. They paid for treatment out of pocket, making the process costly and high stakes. Mr. [redacted] administered all of the shots to his wife and remembered how stressful it was to "sneak" around to give the shots and added, "I hated doing it. It really bothered me." [redacted] Interview). Mrs. [redacted] acknowledged that she was "so grateful that he could give the shots." [redacted] Interview). She added, "He would always make it home on time and make room in his schedule to give the shots. Our lives were on hold for travel and doctors." [redacted] Interview).

Mrs. [redacted] discussed the difficulties juggling doctors' appointments and daily shots but stated, "As hard as infertility is, I always had a desire to be a parent and to experience pregnancy." [redacted] Interview). Consistent with research about the "reproductive story," (Jaffe & Diamond, 2011; Jaffe et al., 2005), Mrs. [redacted] psychologically prepared for parenthood long before she became pregnant. She explained that she volunteered at the church to work with kids "to work on adult child interactions in preparation for parenthood." [redacted] Interview).

Mr. [redacted] found his surgeries invasive and humiliating. He remembered the physical pain involved in the varicocelectomy and TESE procedures and indicated that he found out that the TESE procedure was unsuccessful while he was still in recovery from the procedure. Even worse, the [redacted] recalled how difficult it was for Mr. [redacted] to take care of his wife while also trying to recover from his own surgery. She stated, "[redacted] had to deal with his own pain after they cut into his private parts and then had to take care of my pain at the same time." [redacted] Interview).

Consistent with the literature about the guilt men experience with male factor infertility, (Webb et al., 1999; Throsby et al., 2004; Smith et al., 2009; Petok, W., 2015), Mr. [redacted] felt responsible for the treatment they had to endure. He stated, "If I was normal, I wouldn't have to do this to my wife." [redacted] Interview). He added, "The OHSS brought her to her knees and was the worst I've ever seen her and I felt responsible." [redacted] Interview). Mrs. [redacted] also recalled, with tears, how painful and traumatic the OHSS

was for them. She stated, "If I ever thought about giving up on life, it was then." [redacted] Interview). She described the pain to be as bad as childbirth and explained, "The irony was that I looked like I was pregnant but had no baby. I was carrying around 20 lbs of water." [redacted] Interview; L. [redacted] Dep. at 49). She reported that it took four weeks to recover.

Emotionally, the [redacted] experienced grief, depression, guilt, shame, anxiety, isolation, and feelings of helplessness, low self-worth, and loss of control. Mr. [redacted] shared that he "felt shame and not sufficient enough." [redacted] Interview). He explained, "I love my wife more than anything and the thought that we could not have children destroyed me." [redacted] Interview). Mrs. [redacted] stated, "Infertility can make or break you emotionally." [redacted] Interview). Consistent with the research about the emotional burden of infertility, (*see, e.g.*, Domar et al., 1997; Nichols et al., 2000; Ramezanzadeh et al., 2004; Freeman E.W. et al., 1985; Hanna, E, et al., 2017), Mrs. [redacted] described the loss of control and unpredictability of the process as the most difficult aspect of treatment. She stated, "There are so many unknowns, and nothing is for certain in the IVF world." [redacted] Interview).

The infertility and its treatment impacted their marital relationship. Mr. [redacted] stated, "It was not a life most young married couples should have to live" and explained that it was "trying" and "put a strain" on the relationship. [redacted] Interview). He stated, "We have been struggling with infertility for 10 years and we have only been married 15. This has impacted 2/3 of our married life." [redacted] Interview). Mrs. [redacted] shared that while the infertility struggles have made them stronger, the process has changed the intimacy between them. She stated, "Infertility is in the middle of it (the relationship)" and added, "modesty and privacy did not exist with doctors being involved and all the poking and prodding." she felt like a failure and "awkward because my body didn't function normally to make a baby." [redacted] Interview). While the [redacted] have struggled, they also feel closer from the experience. Mr. [redacted] explained, "I wish people could understand the deep commitment this takes. This is not a flippant decision." [redacted] Interview).

The infertility and treatment also impacted their relationships with family, friends, and work colleagues. Just as the majority of infertile couples do not share their story with friends and family, (Ramezanzadeh et al., 2004), Mrs. [redacted] explained that they kept their infertility journey private and only told a few people about their struggle. She stated, "It was bad enough that the doctors were involved in our private matters." [redacted] Interview). Mr. [redacted] descried how difficult it was to "keep all the shots hidden and do all our appointments in secret" when family and friends were staying at their house or they were at gatherings. [redacted] Interview). He stated, "I felt like we were juggling a double life" and explained that they had to "put on a face" when they were around others. [redacted] Interview).

The [redacted] experience echoes research showing that if men and women are unable to discuss the loss, a deep sense of shame and personal failure may become intensified and they may continue to feel isolated and alienated. (Greenfeld & Walther, 1993; Cousineau and Domar, 2006). At work, Mr. [redacted] noted that he also had to "put on a face and keep

going" even when he would "disappear to undisclosed locations for 2-3 weeks at a time and no one knew why." [redacted] Interview). He told his supervisor and parents about the medical procedures but stated, "There is so much suffering that people go through, but no one talks about it." [redacted] Interview). He added, "Unless you have been through it, the average person just doesn't get it." [redacted] Interview). Mrs. [redacted] also struggled at work. She said that she was always "loyal and hardworking" and found it difficult to "juggle my boss's schedule with trips to see fertility doctors." [redacted] Interview). She also told her boss when she was suffering with OHSS and "blurted out that I couldn't have kids." [redacted] Interview). She ultimately had to take time off from work.

The infertility process also made the [redacted] question their strong faith in God. Mr. [redacted] shared, "In 2012, I questioned my faith in God. I was angry at God and questioned, 'why us'?" [redacted] Interview). Mrs. [redacted] questioned, "Whether I would get to be a parent and whether this is what God wanted." [redacted] Interview). Mr. [redacted] recalled that he had to "learn to accept the bad things." [redacted] Interview). He describes the emotional roller coaster of treatment as finally feeling relief when his son was born but then feeling despair when they miscarried after the second embryo transfer and stated, "Everything that could go wrong went wrong until our son was born but then March 4th happened and I really questioned God." [redacted] Interview). Mrs. [redacted] noted that when she did not know the disposition of the four embryos affected by the Tank Incident, she questioned, "Do I have enough faith to handle the outcome?" [redacted] Interview).

d) The Tank Incident and Associated Perinatal Loss

The couple explained that before the Tank Incident they were "always going back for the four embryos." [redacted] Interview; K. [redacted] Dep. at 48). Mr. [redacted] stated "we were always going to do whatever God gave us." [redacted] Interview; K. [redacted] Dep. at 27). He added, "We wanted all of them. We struggled to get there, and we were going to use them. They were supposed to be there when we decided to go back." [redacted] Interview; K. [redacted] Dep. at 57). He shared that he had just received a bonus at work and that the couple was planning to go back to PFC for another transfer over Labor Day Weekend of 2018. Mrs. [redacted] stated, "We were always coming back for everyone—everyone mattered." [redacted] Interview; [redacted] Dep. at 84). She explained how they had clearly mapped out the rest of their family building plans. She explained, "Those that were left in the tank, that was enough to complete our family. We were going to come back for every one. We had mapped it out with the remaining embryos, how long it would take." [redacted] Dep. at 77). She continued, "but I mapped it out nine months for a pregnancy. I wanted to do breastfeeding. And I even planned it out that I'd have to freeze breast milk so I could maybe go sooner to a frozen cycle so I could go back for the next one. - those embryos were -- were our family. Those were our children those -- you can't replace them." [redacted] Dep. at 79).

Mr. [redacted] learned about the Tank Incident on the radio. After researching the topic on his phone, he said, "My phone hit the floor, I turned white as a ghost, I couldn't speak and the whole world stopped." [redacted] Interview). Mrs. [redacted] recalled the moment her husband told her the news and stated, "I was in disbelief. I struggled for weeks and

was in denial and grief." [redacted] Interview). She explained that her grief was compounded by the knowledge that she and her husband had the extra sperm they had banked destroyed the year before, based entirely on the fact that they knew they had four healthy, viable embryos in storage. (Plaintiff A.B.'S responses to Chart Inc.'s interrogatories at 6). She felt devastated that their family building plans were disrupted and stated, "This was our path and our journey." [redacted] Interview). The couple trusted that their embryos were safely stored, indefinitely, in state-of-the-art equipment, and believed they would remain safe until they were ready to expand their family. She felt like their chances to build a family were over, and stated, "We are not building a family anymore." [redacted] Interview).

After the Tank Incident, Mr. [redacted] noted that "all conversations were wondering about them [the embryos]. All we could think about was getting to them." [redacted] Interview). The couple immediately began making plans to travel to San Francisco so that they could attempt to thaw and use their embryos.

Mrs. [redacted] remembered preparing for the transfer as a traumatic time. Not only did she have to take the medications, but she also had to do so knowing that there was a good chance none of her embryos would be viable. On the first transfer attempt after the Tank Incident, PFC thawed three embryos from Tank 4, two were non-viable. Mrs. [redacted] was devasted that the embryos "did not survive" and noted, "The rate wasn't supposed to be that way. I know that it was advertised 90-plus statistic on thaw rate." [redacted] Dep. at 97). Mrs. [redacted] cried the entire time she relayed the experience of finding out about the viability of the four embryos in Tank Four. She worried that the first two embryos had "passed away in the tank." [redacted] Interview). She described the experience of learning about the "deaths" of the first two embryos and the "viability" of the other thawed embryos as "Grieving losses while holding on to hope." [redacted] Interview). Mr. [redacted] noted, "The first two embryos that didn't make it came home with us to Ohio." [redacted] Interview). She shared what it was like when she picked up the two embryos and remembered, "holding the test tube with my life. It's no way to hold your babies. They passed away and we wanted to move forward and put them to rest." [redacted] Interview). As the research describes, (de Lacey, 2017; Meyer and Nelson, 2001; Lyerly et al., 2006), social rituals and disposal ceremonies are designed to pay moral respect to the embryo and the [redacted] shared that they plan to do a funeral with their Pastor and bury the embryos.

The [redacted] attempted transfer of the third embryo on May 30, 2018 but the transfer was unsuccessful. The final embryo from Tank 4 was thawed, but the [redacted] were strongly advised against transfer, given the lack of viable cells. The [redacted] insisted on the transfer, however. Mr. [redacted] stated, "We believe in miracles. We were not leaving it to their definition." [redacted] Interview; [redacted] Dep. at 71-72). Dr. Givens transferred the embryo on September 2, 2018 but it was unsuccessful. Mrs. [redacted] remembers the fourth transfer "vividly" and acknowledged that it was "a sad transfer from the beginning." Similar to the research described above, (de Lacey, 2017), Mrs. [redacted] viewed her embryos as living entities capable of experiencing suffering and stated, "I remember feeling grief and thinking that this baby is hurting." [redacted] Interview).

e) Conceptualization of the Embryo

Research indicates that the conceptualization of the embryo is the most significant factor in determining how couples will react to embryo disposal. (de Lacey, 2005; Nachtigall et al., 2005; Lyerly et al., 2006; de Lacey, 2007; Nachtigall et al., 2009; Provoost et al., 2009; Provoost et al., 2011; Provoost et al., 2012b). It is clear from the [redacted] description of their embryos that they ascribed high moral status and conceptualized their supernumerary embryos as children and siblings from the same batch of embryos as their existing children. They viewed the damage and destruction of their embryos as death of potential children and siblings to their children, even telling [redacted] parents "you have fewer grandchildren now. The two you already have are it." [redacted] Interview; [redacted] Dep. at 84).

Research shows that people who freeze embryos face emotionally difficult situations when considering the fate of their frozen, stored IVF embryos. On their embryo disposition paperwork, Mr. and Mrs. [redacted] did not consent to the use of immature or unfertilized eggs or leftover sperm or abnormal embryos for quality control or training purposes, (MSO_PWCK_000035), and had specific instructions for embryo disposition in the event of their death. Within this perspective, research shows that many patients wish to donate and metaphorically associate embryo donation as the opportunity to give life. (Newton et al., 2003; Drapkin et al., 2010). This is clearly the case for many patients who wish to put them in the hands of someone who could give them life through surrogacy or donation. The [redacted] took great care to write a detailed description for the disposition of their embryos that would give them life, planning to donate them to be adopted by a Christian couple in an open adoption, (MSO_PWCK_000052); they later amended their wills to provide that Mr. [redacted] parents would be the caretakers of all of the then-unused embryos in the event of Mr. and Mrs. [redacted] death.

Similar to the research related to embryos representing the couple's relationship and fertility journey, Mr. [redacted] stated, "Some people view embryos as just tissue but not after everything we went through. We were fortunate. We thanked God every day for them." [redacted] Interview). These embryos symbolized potential siblings to their two children. Mr. [redacted] acknowledged, "It's hard to look at them (his son and daughter) and imagine siblings playing outside with their brother and sister. We do the calculations about how old the new babies would be." [redacted] Interview). Mrs. [redacted] shared that she looks at her daughter who was conceived with a frozen embryo and reflects, "She was beside the embryos in Tank Four. She's so unique. The four that I lost were so unique too." [redacted] Interview). She explained how different her son and daughter are and added, "Those unique four embryos were one of a kind." [redacted] Interview). She stated, "How do you even begin to measure the emotional damage from the loss of a relationship to four of your children." [redacted] Interview). Mr. [redacted] agreed and noted, "How do you argue with the heart? It's not just science. It's not just tissue. We will never meet them. We were blessed to have met a few of them." [redacted] Interview).

f) Grief, Loss, and Ritual

Consistent with the research above describing the loss associated with consent of embryo destruction, (*see, e.g.*, de Lacey, 2017; Ellison and Karpin 2011), the [redacted] continue to grieve and mourn the loss of their embryos every day and experience feelings of sadness, depression, loss, guilt and emotional distress. Mr. [redacted] stated, "We always felt an obligation to the embryos. . . . Those were our children." [redacted] Interview). Mr. and Mrs [redacted] both acknowledged, "Those were our kids." ([redacted] Interviews). Mrs. [redacted] explained, "They were more than just eggs and embryos in a tank. They are children that aren't here anymore. I'll never have that time with the four. They are lives that mattered. Life is precious." [redacted] Interview). Mr. [redacted] added, "If four teenagers died, we would have memories of them but the majority of our married life was spent creating those embryos-those were our world and they are gone." [redacted] Interview).

They viewed the destruction of their embryos as traumatic death of their potential children. The loss of the [redacted] embryos represented loss of potential lives and siblings to their children as well as the death of genetic material that represents the essence of their partnership, infertility cost, sacrifice and struggle and their reproductive future. The death of their embryos resulted in the loss of control over an outcome that took years of emotional, physical, and financial sacrifice to achieve. They described how they both felt forever changed after the Tank Incident. Mr. [redacted] indicated that they withdrew from friends and became isolated and stated, "chit chat and normal conversations died that day." [redacted] Interview). He explained, "No one could understand the journey before or after. Where do you even begin? I don't want to hear anyone's opinion. There's nothing anyone can say or do." [redacted] Interview). He added, "I'm distant from everyone now. I'm different now. I was a comical person and enjoyed slapstick. Not anymore." [redacted] Interview).

They continue to experience grief and fear. Mrs. [redacted] acknowledged that she "grieves every day." Bereavement is often complicated, and feelings of loss may be triggered by seeing other children or the anniversary of the due date or miscarriage. She explained that every time she's at a birthday party or gathering with friend or family, it "triggers the loss." [redacted] Interview). She added, "I'm always grieving the 'what if'-looking at the calendar and calculating where I would be with breastfeeding and then there's the clash with reality and I have to deal with the grief all over again." [redacted] Interview).

Mr. [redacted] stated,

> This can never happen again to any other parents, individuals, people aspiring to be parents. IVF is so hard. Infertility is so hard. It's like the thing no one ever talks about due to various reasons, from humiliation or shame or anything else.
>
> And to go through everything to get to the point of creation of eggs or embryos or whatever part of the journey that you're on, to have a reasonable expectation that they're going to be taken care of and to lose

them, it's just — I can't... If my children ever have to go through anything like this — I don't want them to ever have to deal with something like this.

[redacted] Dep. at 86-87). The [redacted] explained that their son will likely have to pursue IVF if he inherits the same degenerative disorder as Mr. [redacted] and they are hoping for "safeguards that life won't be treated so carelessly." ([redacted] Interviews). Mr. [redacted] explained, "My son may inherit my problems and I want to help my grandchildren and my son. Everything we do on the farm is to preserve the next generation. The mindset is if there's anything we can do to help the next generation, then we must." [redacted] Interview).

Consistent with research about men's instrumental grieving style and coping by increasing their involvement in work and other activities, (Wischmann et al., 2003; Jordan et al., 1999; Berg et al., 1991), part of Mr. [redacted] grieving process was running another Iron Man after the Tank Incident. He said, "At the finish line, I held up four fingers to the sky to represent the four embryos." [redacted] Interview). Also consistent with rituals cited in the literature that help couples mourn the loss of embryos, the [redacted] told stories about Christmas time and how they hung seven stockings to represent their living son, daughter, the miscarried child, and the four embryos. They also hung snowflakes to represent the four embryos they had frozen. After the Tank Incident, Mr. [redacted] bought Swarovski crystal snowflake ornaments to hang on the tree representing the loss of the four embryos and their miscarriage. Mrs. [redacted] stated, "What once represented hope now is a memorial" and added, "It's hard to take the ornaments out of the box every year." [redacted] Interview).

g) Future Family Building

Mr. and Mrs. [redacted] are unsure about the reproductive road ahead. Mr. [redacted] explained that he is hesitant to start over again and questioned, "Do we throw the dice of fate? Do we do the shots again?" [redacted] Interview). The couple has discussed doing another cycle but are fearful. Mr. [redacted] stated, "We had planned with age to use all the embryos by our mid 40's. This [the Tank Incident] should never have been the reason to think about another cycle then boom went the dynamite." [redacted] Interview). He also noted that he is worried about his degenerative condition and stated, "my numbers [sperm count] were about as close to zero as they could get, so I don't have much margin for error." [redacted] Dep. at 76).

He concluded that for now, he is going to "pour everything into the two that we have." [redacted] Interview). Mrs. [redacted] noted that she is "seeking out God to figure out the purpose now" and questions, "Is there another child I'm supposed to parent?" [redacted] Interview). She acknowledged that "there is so much distrust now and I need time to grieve" but she is conflicted and stated, "I don't want to rob another child if it's meant to be. Grief can't be a mark that hangs over a child's head." [redacted] Interview).

3) Conclusion

Based on my personal interview of Mr. and Mrs. [redacted] the material reviewed, my education, training, clinical experience, research, and review of peer-reviewed published

literature, it is my opinion to a reasonable degree of psychological certainty that the Tank Incident and the [redacted] resulting loss of embryos has caused them both to experience substantial emotional distress, pain, suffering, grief, anxiety, uncertainty, loss, shock, depression, humiliation, shame, and feelings of being out of control. The experience has triggered feelings of distress associated with previous IVF treatment and perinatal trauma. The [redacted] experience is consistent with the research detailed in this report. In sum, the [redacted] have both experienced significant emotional distress and psychological harm and trauma as a result of the Tank Incident.

ELIZABETH A. GRILL, Psy.D

Dated:

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Exhibit A to Expert Report of Dr. Grill

Case Materials Relied On:

[redacted]

- [redacted] Deposition Transcript
- Response to Requests for Production of Documents
- Response to Interrogatories
- MSO_GS_000119–247
- MSO_GS_000382–383
- MSO_GS_000386–413
- PLTF-IJ-000001–230
- PLTF-IJ-000428–583
- PRELUDE000120
- PRELUDE000150

[redacted]

- [redacted] Deposition Transcript
- Response to Requests for Production of Documents
- Response to Interrogatories
- MSO_GS_000248–384
- PLTF-GH-000001–354
- PRELUDE000296–297

[redacted] & [redacted]

- [redacted] Deposition Transcript
- [redacted] Deposition Transcript
- [redacted] Response to Requests for Production of Documents
- [redacted] Response to Requests for Production of Documents
- [redacted] Response to Interrogatories
- [redacted] Response to Interrogatories
- [redacted] Amended Response to Interrogatories
- [redacted] Amended Response to Interrogatories
- MSO_PWCK_000001–434
- PLTF-ABCD-000001–3368

[redacted]

- [redacted] Deposition Transcript
- Response to Interrogatories
- Response to Requests for Production of Documents
- MSO_GS_000001–36
- MSO_GS_000116
- MSO_GS_000380–381
- PLTF-EF-000001–253
- PRELUDE000151–152

CURRICULUM VITAE

Elizabeth Grill

Date of last update: October 2020

A. GENERAL INFORMATION

Office address:	1305 York Avenue, 6th floor New York, New York 10021
Office telephone:	646-962-3314
Office fax:	646-962-0322
Email:	eag2001@med.cornell.edu
Citizenship:	United States

B. EDUCATIONAL BACKGROUND

Degree	*Institution*	*Dates attended*	*Year Awarded*
Psy.D.	Illinois School of Professional Psychology (APA approved), Chicago, Illinois	1996-2000	2000
B. A.	University of Wisconsin, Madison, Wisconsin	1990-1994	1994

C. PROFESSIONAL POSITIONS AND EMPLOYMENT

Post-doctoral training

Title	*Institution*	*Dates*
Post-Doctoral Fellow	Weill Medical College of Cornell University, Center for Reproductive Medicine and Infertility, New York, New York	2000-2001
Post-Doctoral Fellow	Weill Medical College of Cornell University, Sexual Health Clinic, New York, New York	2003-2005

Academic positions

Title	*Institution*	*Dates*
Instructor of Psychology in Obstetrics and	Weill Cornell Medical College, New York, New York	2001-2004

Gynecology		
Instructor of Psychology in Reproductive Medicine	Weill Cornell Medical College, New York, New York	2001-2004
Instructor of Psychology in Psychiatry	Weill Cornell Medical College, New York, New York	2003-2004
Assistant Professor of Psychology in Obstetrics and Gynecology	Weill Cornell Medical College, New York, New York	2004-present
Assistant Professor of Psychology in Reproductive Medicine	Weill Cornell Medical College, New York, New York	2004-present
Assistant Professor of Psychology in Psychiatry	Weill Cornell Medical College, New York, New York	2004-present
Associate Professor of Psychology in Clinical Obstetrics and Gynecology	Weill Cornell Medical College, New York, New York	2010-present
Associate Professor of Psychology in Clinical Reproductive Medicine	Weill Cornell Medical College, New York, New York	2010-present
Associate Professor of Psychology in Psychiatry	Weill Cornell Medical College, New York, New York	2010-present

Hospital positions

Title	*Institution*	*Dates*
Professional Associate (Obstetrics and Gynecology and Reproductive Medicine)	New York Presbyterian Hospital	2001-present

D. LICENSURE, BOARD CERTIFICATION, MALPRACTICE

Licensure

State	*Number*	*Date of Issue*	*Date of expiration*
New York	015162	June 11, 2002	January 31, 2011

Malpractice insurance

Do you have Malpractice insurance? Yes

Premiums paid by: WCMC

E. PROFESSIONAL MEMBERSHIPS

Member/officer	*Name of Organization*	*Dates held*
Member	American Psychological Association	1996-present
Member	The National Register	2000-present
Member	American Society of Reproductive Medicine	2000-present
Officer	Mental Health Professional Group of the American Society for Reproductive Medicine	2000-present
Member	Resolve, Inc.	2000-present
Member	Society for Assisted Reproductive Technology	2002-present
Member	American Fertility Association	2002-present
Member	International Infertility Counseling Organization	2002-present
Member	Women's Mental Health Consortium	2002-present
Member	International Society for the Study of Women's Sexual Health	2004-present
Member	The Association of Reproductive Health Professionals	2004-present
Member	The Society for Sex Therapy and Research	2004-present
Member	The International Society for Sexual Medicine	2008-present

F. HONORS AND AWARDS

Name of award	*Date awarded*
Mental Health Professional Group Prize Paper at ASRM conference "Psychological Characteristics of Egg donors: MMPI-2 Profiles of 436 Anonymous Oocyte Donor Candidates"	October, 2003
Mental Health Professional Group Prize Paper at ASRM conference	October, 2003

"September 11th in New York City: The Effects of a Catastrophe on IVF Outcome in a New York City Based Program"

Global Organization for Excellence in Health, Excellence in Health Care Award. Lima, Peru — 2004-2005

American Fertility Association Family Building Award, Kokopelli Ball. New York, New York — October, 2006

Mental Health Professional Group Prize Paper at ASRM conference "Does Stress Affect In Vitro fertilization (IVF) Outcome?" — October, 2016

G. INSTITUTIONAL/HOSPITAL AFFILIATION

1. Primary Hospital Affiliation: New York Presbyterian Hospital

H. EMPLOYMENT STATUS

Name of Employers: Weill Cornell Medical College, Ronald O. Perelman and Claudia Cohen Center for Reproductive Medicine

Employment Status : Full time salaried by Cornell

I. CURRENT AND PAST INSTITUTIONAL RESPONSIBILITIES AND PERCENT EFFORT

Teaching	**Dates**
Center for Reproductive Medicine and Infertility, New York, New York • Developed and led an educational seminar and stress management course for medical fellows that focused on understanding and managing patients' anxiety as well as their own stress.	2000-2003
Payne Whitney Psychiatry Clinic, New York, New York • Lectured to psychiatry residents about third party reproduction and latest reproductive technology options before, during and after cancer treatment	2005-2010
Center for Reproductive Medicine and Infertility, New York, New York • Taught psychiatry residents rotating through the center about counseling individuals and couples struggling with infertility including all aspects of third party reproduction.	October, 2004

American Society For Reproductive Medicine, Philadelphia, Pennsylvania — September, 2010

- Part of multidisciplinary faculty at nursing professional group postgraduate course titled Nursing Management of the IVF Program: Commitments, Challenges, and Controversies
- Taught about the psychological impact of infertility and assisted and third party reproduction
- Lectured about stress management in the ART program.

The Society for Sex Therapy and Research-New York, NY — October, 2010

- Taught undergraduate students from several universities about the impact of infertility, ART and family building on sexual health.

American Society For Reproductive Medicine- Mental Health Professional Group, Denver, Colorado — October, 2010

- Co-chaired postgraduate course titled Practicing Politics: An Interactive Course on the Ethics and Counseling Issues in ART.
- Discussed key ethical issues that exist in the Assisted Reproductive Technologies
- Summarized different approaches and varied solutions to issues in the provision of ART services

Center for Reproductive Medicine and Infertility, New York, New York — June 2013

- Developed and lead an educational seminar for nurses that focused on the management of difficult patients.

American Society for Reproductive Medicine, Honolulu, Hawaii — October 2014

- Postgraduate Chair of course titled Global Gametes
- Interactive Course on the Psychosocial, Legal, and Ethical aspects Of Cross Boarder Reproductive Care.

American Society For Reproductive Medicine, Baltimore, Marylan — October 2015

- Faculty for Postgraduate Course titled Psychosocial Aspects of Fertility Preservation-From Cancer to Social Reasons and Making Hard Choices-Decision Making for Medical and Elective Fertility Preservation.

Weill Cornell Medical College, NY Presbyterian Hospital, NY, NY — 2019- present

- Invited lecturer for Diversity in Reproductive Choice and Human Sexuality Program for medical students.

- Lectured about the impact of fertility on sexuality.

American Society For Reproductive Medicine, Virtual Conference — October 2000

- Faculty for Postgraduate Course titled Human Reproductive Tissue Cryopreservation: The Lab Science and the Social Science.

Clinical Care	**Dates**
Assessment	
• conduct psychoeducational consultations for intended parents in both in vitro fertilization and gamete donation. • perform psychological and psychodiagnostic assessment of donor egg candidates interested in participating in the donor oocyte program. • serve on multidisciplinary egg donation team to help match egg donors and recipient couples. • assess individuals and couples for sexual dysfunction. • assess patients wishing to cryopreserve gametes for medical and social reasons.	2000-present
Psychotherapy	2000-present
• perform long-and short-term supportive psychotherapy for patients participating in all forms of assisted reproduction. • conduct long-and short-term sex therapy	
Group Therapy	2000- present
• co-lead a Women's Drop-In Support Group where female patients share their concerns, thoughts and feelings related to IVF treatment. • developed and conduct 8-session stress management program that focuses on relaxation techniques, cognitive restructuring, assertiveness skills, and other helpful ways to manage emotional distress for patients undergoing assisted reproduction. • lead a general infertility support group where individuals and couples obtain information and support while coping with the stresses of infertility.	

Administrative duties	**Dates**
Education Committee Chair for Women's Mental Health Consortium	2002-2005
Member of task force committee for Mental Health Professional	2002-present

Group of American Society for Reproductive Medicine	
Officer on the Executive Board of the Mental Health Professional Group of American Society for Reproductive Medicine	2004-2011
Representative of the Mental Health Professional Group on the Content Review Committee of American Society for Reproductive Medicine.	2010-2016
Continuing Education Officer on the Executive Council of the Society for Sex Therapy and Research (SSTAR)	2014-2019
President Elect on the Executive Council of the Society for Sex Therapy and Research	2019
Secretary of RESOLVE, The National Infertility Association	2016-present
Member of the Council on Patient Safety in Women's Health Care of the American College of Obstetricians and Gynecologists	2019

Research	**Dates**
• worked with Dr. Rosenwaks and Dr. Palermo on a follow-up study of pregnancies, neonatal, and pediatric outcomes of five-year-old children born through intracytoplasmic sperm injection fertilization and in vitro fertilization. • conducted psychodiagnostic test batteries to assess mental and motor development of five-year-old children. • abstract presented at the Second Global Conference of Infertility in the Third Millennium: Implications for the Individual, Family and Society in Prague, Czech Republic, November, 2002.	2001-2002
• work with Dr. Josephs on a follow-up study of sister recipients and their sister donors. • administer psychodiagnostic test batteries and semi structured interviews to assess the perceptions, thoughts, and attitudes of both the sister-recipient and the sister-donor following successful completion of a donor oocyte cycle and delivery of a child. • abstract submitted for review for American Society for Reproductive Medicine 2004 conference.	2000-present
• exploring the experiences, thoughts and feelings of patients diagnosed with cancer who are seeking preservation of their future fertility. • Administer tests and questionnaires to cancer patients to gain a better understanding of feelings and experiences regarding the	2001-present

cryopreservation and storage of oocytes/embryos prior to and following both IVF treatment and cancer treatment.

- explored how children born through IVF who were between the ages of 9 and 12 years old understand their conception.
- determined the specific needs of IVF parents for educational materials to share with their children about their IVF origins.
- provided information for parents and those working with these parents on how to share information about IVF with children conceived in this manner.

2003

- worked with Dr. Spandorfer on the effects of September 11th in New York on IVF outcome.
- studied psychological effects of the events of 9/11 on fertility patients.
- Mental Health Professional Group Prize Paper at ASRM conference "September 11th in New York City: The Effects of a Catastrophe on IVF Outcome in a New York City Based Program".

2003

- partnered with Sloan Kettering to examine the emotional, reproductive and quality of life impact of cancer survivors with infertile women without a cancer history seeking third party reproduction
- empirically assessed and compared the emotional, reproductive and quality of life impact of infertility in women with and without a cancer history.
- identified barriers and solutions to assisted reproduction

2007-2009

- partnering with Sloan Kettering to examine the emotional, reproductive and quality of life impact of cancer patients inquiring about cryopreservation.

2013-present

- exploring the experiences, thoughts and feelings of patients diagnosed with cancer who are seeking preservation of their future fertility.

- Administer tests and questionnaires to cancer patients to gain a better understanding of feelings and experiences regarding the cryopreservation and storage of oocytes/embryos prior to and following both IVF treatment and cancer treatment.

- working with Dr. Schattman on study titled Post Partum Depression Correlation with Medical Risk Factors. Investigating the presence of maternal depressive symptoms and different risk factors — 2011-present
- working with Dr. Josephs to look at anonymity, oocyte donation, and the law. Exploring relevant considerations for legislation on anonymity in egg donation — 2013-present
- working with Dr. Schattman on study titled Non-Medical Oocyte Cryopreservation Services: Evaluating Patients' Decision-Making Process — 2018-present
- working with Sheri Gelber, MD on a study titled Sexual Activity and Clinical Discussions During Pregnancy: Observations and Barriers investigating the presence of maternal depressive symptoms and different risk factors — 2018
- working with Dr. Schattman on a study titled Psychosocial Response of Infertile Patients to COVID-19 Related Delays in Care at the Epicenter of the Global Pandemic. — 2020

Current Percent Effort (%)		Does the activity involve WMC students/researchers? (Yes/No)
Teaching	10%	Yes
Clinical Care	80%	No
Administration	5%	No
Research	5%	Yes
TOTAL:	**100%**	

K. EXTRAMURAL PROFESSIONAL RESPONSIBILITIES

- Chair of Education Committee for Women's Mental Health Consortium — 2002-2005
- Secretary/Treasurer of The Mental Health Professional Group of The American Society for Reproductive Medicine. — 2004-2005
- Vice Chair of The Mental Health Professional Group of The American Society for Reproductive Medicine. — 2005-2006
- Editorial Review Board of Fertility Today. — 2004-present
- Medical Advisory Board of Fertile Hope — 2005-2009

Editorial reviewer for Fertility and Sterility	2006-present
Editorial reviewer for Journal of Andrology	2006-present
Peer Review Committee for The Association of Reproductive Health Professionals (ARHP)	2006-present
Chair Elect of The Mental Health Professional Group of The American Society for Reproductive Medicine.	2006-2007
Chair of The Mental Health Professional Group of The American Society for Reproductive Medicine	2007-2008
Editorial reviewer for F1000	2008-2010
Past Chair on the Executive Board of The Mental Health Professional Group of The American Society for Reproductive Medicine	2009-2011
Nominated and elected to two terms as Representative to the Content Review Committee of American Society for Reproductive Medicine.	2010-2013
Nominated and elected to second term as Representative to the Content Review Committee of American Society for Reproductive Medicine.	2013-2016
Chair E-Communications Task Force for MHPG of ASRM	2013-2015
Continuing Education Officer on the Executive Council of the Society for Sex Therapy and Research	2014-2019
President Elect on the Executive Council of the Society for Sex Therapy and Research	2019-present
Member of the Council on Patient Safety in Women's Health Care of the American College of Obstetricians and Gynecologists	2019
Secretary of Resolve, the National Infertility Association	2016-present

L. BIBLIOGRAPHY

Peer Reviewed Articles

Spandorfer, S., Grill, E., Davis, O., Fasouliotis, S, Rosenwaks, Z. September 11th in New York City (NYC): the effect of a catastrophe on IVF outcome in a New York City based program. Fertility and Sterility, 2003; 80: 51.

Riddle, M, Applegarth, L, Josephs, L., Grill, E., Cholst, I., Rosenwaks, Z. Psychological characteristics of egg donors: MMPI-2 profiles of 436 anonymous oocyte donor candidates. Fertility and Sterility, 2003; 80 (3): 50.

Jeanne Carter, PhD, Leigh Raviv, BA, Linda Applegarth, EdD, Jennifer Ford, PhD, Laura Josephs, PhD, Elizabeth Grill, PsyD, Charles Sklar, MD, Yukio Sonoda, MD, Raymond E. Baser, MS, Richard R. Barakat, MD. A Cross-Sectional Study of the Psychosexual Impact of Cancer-Related Infertility in Women: Third-Party Reproductive Assistance. The Journal of Cancer Survivorship 2010; 4: 236-246.

Jeanne Carter, PhD, Linda Applegarth, EdD, Laura Josephs, PhD, Elizabeth Grill, PsyD, Zev Rosenwaks, MD. A Cross-sectional Cohort Study of Infertile Women Awaiting Oocyte Donation: The Emotional, Sexual and QOL impact. Fertility and Sterility 2011; 95: 711-716.

Grill, E, The role of the mental health professional in education and support of the medical staff. Fertility and Sterility 2015; 104 (2); 271-6.

Domar, Alice D ; Grill, Elizabeth A ; Christ, Mary ; Malikov, Evgueni. Insights from women with fertility concerns about their choices when attempting to improve their ability to conceive. Fertility and Sterility, September 2019, Vol.112(3), pp.e381-e381

Domar, Alice D ; Jasulaitis, Lauren ; Jasulaitis, Sue ; Grill, Elizabeth A ; Uhler, Meike L The impact of the fertistrong app on anxiety and depression in men. Fertility and Sterility, September 2019, Vol.112(3), pp.e379-e379

Books, Book Chapters and Reviews

2004 Grill, E.; Josephs, L; Brisman, M. Legal and Ethical Issues. In Chan P (ed) *Reproductive Medicine Secrets*. (pg.342-362). Philadelphia: Hanley& Belfus, Inc., Medical Publishers, 2004.

2004 Applegarth, L; Grill, E. Psychological Issues in Reproductive Disorders. In Chan P (ed) *Reproductive Medicine Secrets*. (pg.391-402). Philadelphia: Hanley & Belfus, Inc., Medical Publishers, 2004.

2005 Grill, E. Treating Single Women by Choice. In Rosen A & Rosen J (eds). *Psychodynamic Dimensions of Infertility and Assisted Reproduction*. (pg.167-197). Hillsdale, NJ: The Analytic Press, Inc., 2005.

2010 Hsiao, W; Grill, E., Schlegel, P. Assisted Reproductive Techniques and Donor Sperm in Cancer Patients. In Donnez and Kim Principles and Practice of Fertility Preservation. Cambridge University Press; 2011. p. 225-238.

2013 Perlman, M and Grill, E., The Role of Sex Therapy for Male Infertility. In Goldstein, M and Schlegel, P (ed) Male Infertility: Surgical and Medical

Management. Cambridge University Press, 2013. p. 204-219.

2015 Grill, E., Infertility and Sexual Dysfunction in the Couple. In Lipshultz, L, Pastuszak, A, Perelman, M, Giraldi, A and Buster, J (ed) Sexual Health in the Couple: Management of Sexual Dysfunction in Men and Women. Springer. In Press

2015 Grill, E., Female Sexual Dysfunction and Infertility. In Lipshultz, L, Pastuszak, A, Perelman, M, Giraldi, A and Buster, J (ed) Sexual Health in the Couple: Management of Sexual Dysfunction in Men and Women. Springer. In Press

2020 Grill, E and Beautty, L. Psycholgocal Counseling and Ethics of the Future. In Patient-Centered Assisted Reproduction edited by Dr Alice Domar, Dr Denny Saakas, Dr Thomas Toth. Cambridge Press. In Press.

2020 Grill, E., Meyers, A., and Domar, A. Female Sexual Dysfunction and Infertility in Psychological and Medical Perspectives on Infertility and Sexual Dysfunction edited by Dr Kim Bergman and William Petok. Elsevier. In Press.

2020 Domar, A., Meyers, A., Grill, E. Infertility-Related Stress and Sexual Dysfunction In Men, Women, and the Couple in Psychological and Medical Perspectives on Infertility and Sexual Dysfunction edited by Dr Kim Bergman and William Petok. Elsevier. In Press.

2020 Grill, E. Psychosocial Factors and Fertility Counseling. In Handbook of Problem-based Reproductive Endocrinology and Infertility edited by Dr Zev Rosenwaks and Dr. Pak Chung. Springer Publishing. In Press.

Abstracts

Sister ovum donation: Psychological outcomes
Fertility and Sterility, *Volume 82, Supplement 2*, *September 2004*, *Pages S102-S102*
L.S. Josephs, E. **Grill**, K. Crone, L. Applegarth, I. Cholst, Z. Rosenwaks

The use of complementary medical therapies (CMT) in infertility patients
Fertility and Sterility, *Volume 92, Issue 3, Supplement 1*, *September 2009*, *Pages S33-S34*
A. Aelion, E. Barbieri, S. Shastri, E. **Grill**, P. Chung, Z. Rosenwaks

Psychological characteristics of sister oocyte donor candidates: A comparison against anonymous donor candidates using the MMPI-2
Fertility and Sterility, *Volume 82, Supplement 2*, *September 2004*, *Pages S100-S100*
M.P. Riddle, L. Applegarth, L. Josephs, E. **Grill**, I. Cholst, Z. Rosenwaks

Psychological characteristics of egg donors: MMPI-2 profiles of 436 anonymous oocyte donor candidates

Fertility and Sterility, *Volume 80, Supplement 3*, *September 2003*, *Page 50*
Mary P. Riddle, Linda Applegarth, Laura Josephs, Elizabeth **Grill**, Ina Cholst, Zev Rosenwaks

Families created by ovum donation: Preliminary data on parents' thoughts and feelings about the donation experience and disclosure
Fertility and Sterility, *Volume 86, Issue 3, Supplement 1*, *September 2006*, *Pages S56-S57*
L.D. Applegarth, M.P. Riddle, K. Amoroso, L. Josephs, E. **Grill**, I. Cholst

Psychosocial aspects of multifetal pregnancy reduction
E. Grill, Psychological Aspects Of Infertility Treatment In Lin Tan S., Gomel V., Gosden R., Tulandi T. (ed) 14th World Congress on In Vitro Fertilization & 3rd World Congress on In Vitro Maturation, September 2007.

The impact of the fertistrong app on anxiety and depression in men
Domar, A, Jasulaitis, L, Jasulaitis, S, Grill E, Uhler, M. Fertility and Sterility, September 2019, Vol.112(3), pp.e379-e379.

Consumer Publications

2003 Grill, E. Infertility and the Mind/Body Connection. *The Newsletter of New York Metro American Infertility Association, 2003.*

2004 Grill, E. Coping with the Holiday Season. *IAAC's Canadian Journal of Infertility Awareness, 2004.*

2004 Grill, E. Infertility and the Mind/Body Connection. *IAAC's Canadian Journal of Infertility Awareness, 200*4.

2004 Grill, E. Disclosure in Third Party Reproduction: Should Parents Disclose to the Child, Family, or Friends the Genetic Origins and Gestational Ties of Their Offspring*? Fertility Today Magazine*, 2004.

2004 Grill, E. Infertility and the Mind/Body Connection. *Fertility Today Magazine, 2004.*

2004 Applegarth, L.; Grill, E.; Josephs, L. Parenthood After Cancer. *Fertile Hope Guide, 2004.*

2006 Grill, E. Psychosocial Aspects of Multifetal Pregnancy Reduction. *IAAC's Canadian Journal of Infertility Awareness, 2006.*

2019 Grill, E. Coping with Infertility and Pregnancy Loss. RESOLVE website.

2019 Grill, E. and Domar, A. Coping with Infertility. NESTLE Health Incubator

Invited Presentations

Association of Reproductive Managers, Providence, Rhode Island — June 2001
- lectured about the physiological and psychological effects of stress and the mind/body connection.
- taught stress management techniques to members of ARM.

Resolve of NYC, New York, New York — August 2001, 2002 2003, 2004
- lecture about psychological aspects of infertility and ART treatment.
- teach stress management techniques to individuals and couples experiencing infertility.

American Infertility Association, Westchester, New York — May 2002
- lectured to patients about the mind body connection and stress management skills.

Veteran's Administrations, New York, New York — September 2002
- lectured to psychology interns about the psychosocial impact of infertility and reproductive medicine.

National Infertility and Adoption Conference, New York, New York — April 2003
- lectured about Breast Cancer and Fertility: Fertility Risks, and Parenthood Options Throughout the Journey
- lectured about Parenthood After Cancer: Options for Men and Women before, During and After Cancer Treatments

Art of Donor Oocytes and Third Party Reproduction, Charleston, South Carolina — June 2003
- led roundtable to nurses, physicians and mental health professionals about managing stress in the workplace, understanding the mind body connection, and developing stress management skills.

International Consumer Support for Infertility, Madrid, Spain — June 2003
- taught workshop about common problem areas and pregnancy in support groups.
- discussed pre-selection process, termination issues and strategies to achieve group cohesion and manage complex group dynamics.

Resolve Regional Conference, Stamford, Connecticut — September 2003
- lectured to patients about the mind body connection and stress management skills.

American Society For Reproductive Medicine, San Antonio, Texas — October 2003
- led workshop on the psychosocial issues related to multifetal pregnancy reduction.

- spoke as part of an expert panel on issues related to incorporating research into daily practice.

American Infertility Association, New York, New York — November 2003
- lectured at seminar about the psychological issues related to choosing ovum donation.

National Council of Jewish Women-The Women's Clinic Didactic Schedule, New York, New York — December 2003
- lectured to mental health professionals about the psychosocial issues related to multifetal pregnancy reduction.

American Infertility Association, Garden City, New York — March 2004
- lectured to patients about the mind body connection and stress management skills.

National Infertility and Adoption Conference, New York, New York — April 2004
- lectured to patients about infertility and the single woman.

International Infertility Counselors Organization (IICO) of the International Federation Of Fertility Societies (IFFS), Montreal, Canada — May 2004
- lectured as part of international faculty panel on the "Global Perspectives on Infertility Counseling"

Art of Donor Oocytes and Third Party Reproduction, Charleston, South Carolina — May 2004
- lectured to nurses, physicians and mental health professionals about managing stress in the workplace, understanding the mind body connection, and developing stress management skills.

International Consumer Support for Infertility, Berlin, Germany — June 2004
- taught workshop to international group of consumer support group
- leaders on stress management and the mind/body connection for patients and patient leaders.

American Society For Reproductive Medicine- Mental Health Professional Group Symposium, Philadelphia, Pennsylvania — October 2004
- lectured as part of faculty panel for symposium titled "Ethical Dilemmas Facing the Mental Health Professional: Multiple Roles, Conflicts of interest, and Professional Responsibilities".

First Annual Fertility Forum for Nurses, Sturbridge, Massachusetts — October 2004
- Lectured to nurses about managing stress in the workplace, understanding the mind body connection, and developing stress management skills.

Serono Symposia -Eighteenth International Conference for Nurses and Support Personnel in Reproductive Medicine-New Orleans Louisiana — May 2005

- Lectured about managing stress in the workplace, understanding the mind body connection, and developing stress management skills
- Lectured as part of faculty panel for symposium titled "Trends in Fertility Preservation".

Association of Reproductive Managers- Northeast Regional Meeting-Atlantic City, New Jersey — May 2005

- Lectured about stress management in the ART program

International Consumer Support for Infertility-Copenhagen, Denmark — June 2005

- Lectured to patient organization leaders about understanding the psychological aspects of ooctye donation.

ART of Donor Oocytes Third Party Reproduction Conference-Charleston, South Carolina — June 2005

- Lectured to nurses, physicians, and support personnel about the psychological aspects of delivering good and bad news to patients.
- Taught techniques for breaking bad news to patients.

American Society For Reproductive Medicine- *Women's council* Montreal, Quebec — *October 2005*

- Participated in multidisciplinary panel
- Lectured to nurses, physicians, and mental health professionals about the psychological aspects of balancing career, family and life.

Organon Regional Nurses Meeting-Atlanta, Georgia — December 2005

- Lectured about managing stress in the workplace, understanding the mind body connection, and developing stress management skills

Family Matters-The National Fertility and Adoption Conference of the American Fertility Association- New York, New York — May 2006

- Lectured about libido, infertility and ART

International Consumer Support for Infertility-Prague, Czech Republic — June 2006

- Lectured to patient organization leaders about the psychosocial aspects of multi-fetal pregnancy reduction

Canadian Fertility and Andrology Society, Montreal Canada — September 2007

- Lectured on panel about psychosocial aspects of multi-fetal pregnancy reduction

American Society For Reproductive Medicine, Atlanta, Georgia — October 2009

- Chaired and part of multidisciplinary panel on controversial topics

related to medical and non-medical gamete cryopreservation

The Society for Sex Therapy and Research-New York, NY September 2009

- Lectured to physicians and therapists about the impact of infertility, ART and family building on sexual health.

American Society For Reproductive Medicine, Denver, Colorodo October 2010

- Co-Chaired postgraduate course titled Practicing Politics: An Interactive Course on the Ethics and Counseling Issues in ART
- Lectured on Models of Practice and Counseling Interventions

The European Society of Human Reproduction and Embryology July 2011
Stockholm, Sweden

- Presented at the pre-congress course organized by the mental health special interest group
- Discussed challenges of intrafamilial gamete donation

Memorial Sloan-Kettering Cancer Center, New York, New York October 2011

- Speaker on professional panel at the Cancer and Fertility: Options, Challenges, Strategies conference.
- Presented issues related to decision-making about fertility treatment.

ART of Donor Oocytes Thirst Party Reproduction Conference-Charleston, March 2012
South Carolina

- Lectured to nurses, physicians, and support personnel about the psychological aspects and challenges of intrafamilial gamete donation.

ICPP Conference-Cape Town, South Africa, July 2012

- Lectured to mental health professionals about cross-border reproductive care.

ART of Donor Oocytes Thirst Party Reproduction Conference-Charleston, March 2013
South Carolina

- Lectured to nurses, physicians, and support personnel about cross-border reproductive care

American Society For Reproductive Medicine, Denver, Colorodo October 2013

- Chair of symposium titled Controversies in Fertility Preservation

American Society For Reproductive Medicine, Denver, Colorodo October 2013

- Speaker of symposium titled Models of Practice and Counseling Interventions

American Society For Reproductive Medicine, Honolulu, Hawaii October 2014

- Postgraduate Chair of Global Gametes

ART of Donor Oocytes Thirst Party Reproduction Conference-Charleston, South Carolina March 2015

- Lectured to nurses, physicians, and support personnel about the management of difficult patients.

McGill University, Montreal Canada May 2015

- Lecture on panel about psychosocial aspects of oocyte banks for donors and intended parents.

American Society For Reproductive Medicine, Baltimore, Maryland October 2015

- Faculty for Postgraduate Course on Psychosocial Aspects of Fertility Preservation-From Cancer to Social Reasons. Making Hard Choices-Decision Making for Medical and Elective Fertility Preservation.

Canadian Fertility and Andrology Society, Montreal Canada October 2015

- Lecture on panel about psychosocial aspects of oocyte banks for donors and intended parents.

ART of Donor Oocytes Thirst Party Reproduction Conference-Charleston, South Carolina April 2017

- Lectured to nurses, physicians, and support personnel about the psychological considerations in fertility preservation.

ESHRE Campus- Communication with Patients Conference, London, England March, 2018

- Lectured to nurses, physicians, and support personnel about communicating with and managing difficult patients.

SSTAR Annual Meeting: Plenary Talk, Philadelphia, PA April 2018

- Lectured to nurses, physicians, and support personnel about communicating with and managing difficult patients.

ART of Donor Oocytes Thirst Party Reproduction Conference-Charleston, South Carolina April 2018

- Lectured to nurses, physicians, and support personnel about recognizing and remedying burnout.

University at Sea, Caribbean April 2018

- Lectured to nurses, physicians, and support personnel about recognizing and remedying burnout, improving patient care, and managing difficult patients.

International Symposium for Reproductive Medicine- MERCK plenary session: What Women Want -Ukraine, May 2018

- Lectured to nurses, physicians, and support personnel about communicating with and managing difficult patients.

Sexual Medicine Society of North America Annual Conference: Miami, Florida November 2018

- Lectured to physicians and mental health professionals about the impact of infertility on sexuality.

International Society for the Study of Women's Sexual Health Annual Conference- March 2019
Atlanta, Georgia

- Lectured to nurses, physicians, and support personnel about the impact of infertility on sexuality.

ART of Donor Oocytes Third Party Reproduction Conference-Charleston, April 2019
South Carolina

- Lectured to nurses, physicians, and support personnel about how to survive and thrive in a third party reproductive program.

Ferring Pharmaceuticals HBA Event, New Jersey: May 2019

- Lectured to businesses about patient centered care

Thomas Jefferson University-When it Takes More than Two to Make a Baby: May 2019
Philadelphia Pennsylvania

- Lectured to nurses about patient diversity and mental health
- Lectured to physicians, nurses, and mental health professionals about creative counseling interventions and theoretical frameworks.

American Society for Reproductive Medicine-The Impact Of Infertility October 2019
On Female Sexuality. Philadelphia Pennsylvania

Cryos Symposium Disclosure and Anonymity: The Impact of Genealogy February 2020
and Testing On Adoption and ART: 21st Century Realities: Orlando, Florida

ART of Donor Oocytes Thirst Party Reproduction Conference-Charleston, July 2020
South Carolina

- lectured to nurses, physicians, and support personnel about the psychological aspects and challenges of delivering bad news.

American Society For Reproductive Medicine, Virtual Conference October 2020

- ACOG Ken Ryan Ethics Symposium. Lectured to nurses, physicians, and support personnel about the limitations of anonymity in third party reproduction

American Society For Reproductive Medicine, Virtual Conference October 2020

- Postgraduate course. Lectured to nurses, physicians, and support personnel about the psychosocial aspects of human reproduction tissue cryopreservation.